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ABSTRACT

This action research project implemented and evaluated a program for increasing student engagement and retention through the use of authentic assessment and cooperative groups. The targeted population consisted of one sixth grade class in an elementary school and two ninth grade classes in a high school located in different communities in the far northern suburbs of Chicago, Illinois. The problems of student engagement and retention were documented through teacher observation, student survey data collection, pre-intervention results, and post-intervention results. Analysis of probable cause revealed that students showed little if any ownership for their own learning, took a minor role in the development of learning activities, and had little if any authentic assessment instruments incorporated into their learning. Teachers felt that students studied only for the test grade without any regard for the transfer of what they had been taught. A review of solution strategies suggested by knowledgeable others and analysis of the problem setting resulted in two major categories of intervention: the use of cooperative groups within the classroom, and the application of authentic teaching and evaluation devices. Post intervention data indicated an improvement in student involvement and ownership, and an increase in retention and transfer of learning. (Forty appendices include surveys, data sheets, and assessment tools.) (Author)

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INCREASING STUDENT ENGAGEMENT AND RETENTION THROUGH THE USE OF COOPERATIVE GROUPS AND AUTHENTIC ASSESSMENT

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An Action Research Project Submitted to the Graduate Faculty of the
School of Education in Partial Fulfillment of the
Requirements for the Degree of Master of Arts in Teaching and Leadership

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ABSTRACT

This report describes a program for increasing student engagement and retention through the use of authentic assessment and cooperative groups. The targeted population consists of one sixth grade class in an elementary school and two ninth grade classes in a high school. The two schools are located in different communities in far northern suburbs of Chicago. The problem of student engagement and retention were documented through teacher observation, student survey data collection, pre-intervention results, and post-intervention results.

Analysis of probable cause revealed that students showed little if any ownership for their own learning, took a minor role in the development of learning activities, and had little if any authentic assessment instruments incorporated into their learning. Teachers felt that students studied only for the test grade without any regard for the transfer of what they had been taught.

A review of solution strategies suggested by knowledgeable others and analysis of the problem setting, resulted in two major categories of intervention: the use of cooperative groups within the classroom, and the application of authentic teaching and evaluation devices.

Post intervention data indicated an improvement in student involvement and ownership, and an increase in retention and transfer of learning.

TABLE OF CONTENTS

CHAPTER 1 - PROBLEM STATEMENT AND CONTEXT........1

General Statement of the Problem........1

Immediate Problem Context........1

The Surrounding Community........6

National Context of the Problem........7

CHAPTER 2 - PROBLEM DOCUMENTATION........9

Problem Evidence........9

Probable Causes........14

CHAPTER 3 - THE SOULUTION STRATEGY........17

Literature Review........17

Project Objectives and Processes........26

Project Action Plan........27

Methods of Assessment........30

CHAPTER 4 - PROJECT RESULTS........31

Historical Description of the Intervention........31

Presentation and Analysis of Results........44

Conclusions and Recommendations........51

REFERENCES........57

APPENDIX

A SITE ONE PRE-INERVENTION TEST SURVEY CHARTS........62

B SITE ONE PRE-INERVENTION ATTITUDE SURVEY CHARTS....65

C SITE TWO PRE INTERVENTION TEST SURVEY CHARTS............67

D SITE TWO PRE INTERVENTION ATTITUDE SURVEY CHARTS.70

E SITE ONE ICE BREAKER..........72

F SITE ONE CHALLENGE YOUR MIND..........74

G SITE ONE WHAT..........76

H SITE ONE FOOD PYRAMID..........78

I SITE ONE VENN DIAGRAM..........81

J SITE ONE LEARNING AT RIGHT ANGLES..........83

K SITE ONE WEBS/MAPPING..........85

L SITE ONE ENTRANCE CARD..........87

M SITE ONE FOOD JOURNAL..........89

N SITE ONE LIFESTYLE CONTRACT..........91

O SITE ONE/TWO KWL CHART..........93

P SITE ONE/TWO PMI CHART..........95

Q SITE ONE PORTFOLIO ASSESSMENT FORM..........97

R SITE TWO BACK TO SCHOOL SCAVENGER HUNT..........99

S SITE TWO PLAYER DATA SHEET..........101

T SITE TWO PARENT, & TEACHER SURVEYS..........103

U SITE TWO RULES FOR GROUP WORK..........106

V SITE TWO EGYPT PROJECT LIST 108

W SITE TWO WORD MAP 111

X SITE TWO GROUP EVALUATION 113

Y SITE TWO COLORING BOOK GRADING SHEET 115

Z SITE TWO EGYPT PROJECT EVALUATION 117

AA SITE TWO IMPORTANCE PYRAMID 119

BB SITE TWO FAT/SKINNY QUESTIONS 122

CC SITE TWO PLAY ASSESSMENT RUBRIC 124

DD SITE TWO PLAY PRACTICE PICTURES 126

EE SITE TWO ADOPT-A-COUNTRY CHECKLIST 128

FF SITE TWO CASTLE/CATHEDRAL QUIZ QUESTIONS 130

GG SITE TWO AFRICA GROUP EVALUATION 135

HH SITE TWO AFRICAN MASKS 137

II SITE TWO SAMPLE MASK STORY 139

JJ SITE TWO MASK RUBRIC 141

KK SITE ONE POST INTERVENTION TEST SURVEY CHARTS 143

LL SITE ONE POST INTERVENTION ATTITUDE SURVEY TABLE. 146

MM SITE TWO POST INTERVENTION TEST SURVEY CHARTS 150

NN SITE TWO POST INTERVENTION ATTITUDE SURVEY TABLE 153

CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The students of the targeted populations of the elementary and secondary levels exhibit a lack of learner engagement and poor assessment performance. Evidence for the existence of this problem includes test scores, teacher surveys, teacher and student interviews, exit surveys, observations and supporting research.

Immediate Problem Context

This action research project takes place in two separate school districts which are in geographic proximity in the northeastern portion of a Mid-Western state. The communities and schools will be identified as Site One and Site Two.

Site One

School Site One is a high school district. The enrollment is 1,783, with a teacher pupil ratio of 21.1:1. The annual operating expenditure is $5,851 per pupil. The school is responsible for and works closely with a

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facility for at-risk students within the district (State School Report 1995).

Operations are presided over by a site-based superintendent and principal, each of whom began employment in the fall of 1995. The new administrative team has brought about several changes in building policies and job descriptions.

The present school site is on 19.5 acres which contain the building, parking lots, and athletic fields. This site also includes 4 tennis courts, 2 baseball fields, a football field, and track. The original school structure was built in 1915, and additions were made to the building in 1926, 1954, 1962, and lastly 1971. These building changes have created a variety of classroom learning environments. Air conditioning is located in the administrative offices and computer labs. The flooring is tile with the exception of carpeting in the administrative offices and commons area, and hardwood flooring is in each of the two gymnasiums (Lake County Planning and Zoning, 1996).

The school floor plan is two levels consisting of 74 classrooms, cafeteria, commons area, auditorium and 5 administrative offices. Two mobile classrooms were added in 1992 to accommodate the growing student population. Computer labs have recently been updated and a journalism lab, including a photography lab, has been added. In 1976 , the district purchased 50.5 acres located five miles southeast of the school. This site is used primarily for athletics and has been considered as a possible site for a second school (Student/Parent Handbook, 1995/96).

Site One's total enrollment is 1,783 students. Ninety-seven percent of the pupils are Caucasian, 1.3 % are Hispanic, 0.3 % are African-American, 1.3 % are Asian-Pacific Islander, and 0.2 5 are Native American. "Other" students make up 0.4 % (State School Report 1995).

The attendance rate is 93.0 %. The school has a 1.9 % truancy rate. Two point four percent of the students are from low income families and 0.1% of the students have limited English proficiency. There is a 3.7% dropout rate (State School Report 1995).

There are 143 staff members. One-hundred one are regular classroom teachers, 34 are special education teachers and there are 8 administrators. Support staff includes 6 Special Education teacher aides, 17 secretaries and a maintenance staff of 4 members. Transportation and custodial services are contracted to outside agencies (Staff Directory, 1995/96).

The average teacher salary for the 1994/95 school year was $46,279 and the average administrator salary was $64,372. Sixty-two point six percent of the teachers have a masters degree or above (State School Report 1995).

Site Two

School Site Two is a first through sixth-grade facility. The original structure, which was built in 1957, housed 200 students. A two-room addition was constructed in 1967. The latest addition was completed and tripled the available room in 1972. The office, music room, and staff center are the only air-conditioned areas in the school. All of the non-air conditioned classrooms have windows to open for ventilation, except for eight interior class rooms which have no windows (Staff Directory, 1995/96).

School Site Two's total enrollment is 693 pupils with 65.1% of the students Caucasian, 31.2% Hispanic, 2.2% African-American, 1.4% Asian/Pacific Islander, and 0.1% Native American. The attendance rate is 95.3%, with a low rate of chronic truancy of five students. Forty percent of the students are from families of low income, and 23.5% of the students have limited English proficiency (State School Report Card 1994).

The staff consists of the principal, who joined the faculty in the fall of 1995 but has been in the district since 1991, and 65 staff members. Twenty-four are regular classroom teachers. There are four special education teachers in the Regular Education Initiative program (REI), which has been cut for the 1996/97 school year. One of these is a self-contained special education teacher. There are four teachers in self-contained bilingual classes, and there is one teacher for music and one for physical education. Music is scheduled for 20 minutes twice a week and PE is scheduled for 25 minutes twice a week. Band is an elective (Staff Directory, 1995/96).

Support personnel constitute the balance of the staff. They include thirteen teaching assistants, a speech therapist, a social worker, a librarian (cut for 1996/97), a reading recovery teacher, a Title One reading teacher, a behavior disorder teacher, a gifted students teacher, two English as a Second Language (ESL) teachers, one Early Childhood teacher, one prekindergarten teacher, one special education resource teacher, one secretary, one clerk, one part-time nurses aide, three custodians, and numerous parent volunteers. The district provides its own bus transportation (Staff Directory, 1995/96). School Site Two is part of a unit district of 5,215 students. The teacher-pupil ratio is 24.4:1 with an annual operating expenditure per pupil of $4394 (State School Report Card 1994).

School Site Two has two play areas for students. The first includes a three-acre playground with park-district maintained equipment. This playground is for grades one through three. The other play area is for grades four through six and includes a park-district maintained softball field, a volleyball court, playground equipment, basketball hoops, and a parking lot which doubles as a kick ball field. Also included are grassy areas used as football/soccer fields (Staff Directory, 1995/96).

The district has five elementary buildings, a middle school and a high school. All have site-based management. The superintendent and the assistant superintendent started working in the district in 1992, and other district administrators were hired since then. Recent differences between the school board, district administrators, and teachers resulted in an eight - week strike which polarized the district and community. Even though building and operations fund referenda were passed in March of 1996, extensive financial problems still exist (Staff Directory, 1995/96).

The average teacher salary for the 1993/94 school year was $38,121, and the average administrator salary was $59,640. Fifty-two point seven percent of the teachers have master degrees or above, and the average years of teaching experience was 13.3 (State School Report Card 1994).

Surrounding Community

Each school is located within a suburb of the same large metropolitan area surrounding a major city in the Midwest.

Site One

Site One enrollment is comprised of students from three communities with a total population of 38,810, and whose differences are statistically insignificant. The median home value is $102,650 and the median income is $36,567. The population is made up of 98.1% Caucasian, 1.7% Hispanic, 0.4% African-American, 0.6% Asian /Pacific Islander, and .2% Native American. Other groups make up the final 0.4% (Lake County Census Plus, 1990).

Site Two

Of the 25,280 residents, 58% are high school graduates. Most residents in the area are employed in blue collar occupations. The median family income is $33,036, while the median home value is more than double that amount at $72,200 (Lake County Census Plus, 1990).

Most of the population (77%), is Caucasian. The Hispanic population appears to be growing, as indicated by increasing enrollment in the schools, and makes up 15% of the population. The African-American, Asian, and Native American residents each comprise about 1% of the population. Other ethnic groups comprise the final 5% (Lake County Census Plus, 1990).

Regional and National Context of Problem

In the service of accountability, educators have been emphasizing the student as consumer, client and customer. Consequently, assessment is asking the wrong questions of the wrong people. Outcome measures are often intended to evaluate student and teacher performance rather than to assess teaching and learning (Latchaw, 1995).

Performance assessment, also known as alternative or authentic assessment, is a form of testing that requires students to perform a task rather than select an answer from a ready-made list. For example, a student may be asked to explain historical events, generate scientific hypotheses, solve math problems, converse in a foreign language, or conduct research on

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an assigned topic. Experienced raters-either teachers or other trained staff-then judge the quality of the student's work based on an agreed-upon set of criteria. This new form of assessment is most widely used to directly assess writing ability based on text produced by students under test instructions (Sweet,1993). Authentic assessment reflects the subject's content and process and the conditions for achievement, emphasizing whether student's progress is reasonable for their age and experience (Hughes, 1993). Methods such as open-ended questions, extended tasks, and portfolios have been used to successfully measure performance.

Recent developments of local, state, and national exit outcomes call for changes in assessing student performance (Crotty, 1994). Cognitive assessment by the classroom teacher is essential to fostering the achievement of cognitive and metacognitive learning that is called for in national reports (Calfee, 1994). Schools must consider performance or authentic assessment as a way to increase learner interest, motivation, and independence (Grady, 1994).

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CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

Perceptions of assessment and student feelings about school were documented at each of the two targeted sites. Assessment surveys were administered to students, teachers, and parents. Each included three important categories: the types of testing the students most commonly experienced, the time invested preparing for tests, and the intrapersonal feelings the students had towards test taking. In addition, student and teacher interviews were conducted to find out how students felt about assessment.

Surveys dealing with students' engagement and general attitudes toward school were also administered. These surveys asked questions which dealt more with the disposition and feelings of students, rather than the specific details of assessment components.

The results of the surveys were compiled and compared to get an overall picture of student achievement and involvement, and average quarter and semester grades in the same subject classes from the 1995/96 school year were tabulated in order to make additional comparisons.

School Site One

The first questions on the survey were related to the types of testing the students most commonly experienced. The results of the student surveys in the targeted site one classes indicated that out of 60 students, 13% of the students frequently had taken standardized tests, 31% of the students sometimes had taken standardized tests, 50% of the students rarely had taken standardized tests and 6% of the students never had taken standardized tests.

Parental responses from 52 parents regarding types of tests experienced by students indicated similar findings. The parents of the targeted students indicated that 50% of the students frequently had taken standardized tests, 36% of the students sometimes had taken standardized tests, 0% of the students rarely had taken standardized tests and 0% of the students never had taken standardized tests, and 14% unknown. The differences of the parental and students responses may be attributed to the lack of communication between parent and child with regard to assessment.

Forty-two teacher responses to the surveys were similar in nature to the students, with the exception of the types of tests they gave. Teachers gave multiple responses which did not statistically alter the findings.

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Pre-intervention test survey responses (See Appendix A), illustrate that Site One students enjoy multiple choice tests more than any other type of test, and these same type of tests are given by teachers more often than other kinds of tests.

When asked about time studying, 88% of the students said they studied less than one hour for each test. Fourty-three percent of the students responded that they felt nervous or confused when they knew they were going to take tests.

The attitude survey (See Appendix B), revealed that the largest percentage of students sometimes or never like to attend school (41%), sometimes or never use time wisely (51%), do not always like to read (91%), and sometimes or never like to use new vocabulary words (60%). These students sometimes or never ask for help with their homework (74%), do not always ask for help with school projects (94%), sometimes or never follow directions in class (31%), and sometimes or never bring work home for others to see (71%). Site One students sometimes or never talk about school activities at home (45%), do not always use the community library (91%), always have daily chores or responsibilities (43%), but sometimes or never do those chores or responsibilities without being told (38%).

Traditional average grades from the 1995/96 school year in the targeted subject area of health were 66.73% for the first quarter, 74.2% for the second quarter, and 70.46% for the first semester. The first semester average for the 1995/96 school year is well below the accepted median grade average of seventy-five percent.

The high level of student anxiety, the type of test questions the students and the teachers preferred, and the lack of student engagement as illustrated by student responses to the attitude survey, all display a need for a change in assessment procedures.

School Site Two

Surveys for school site two were kept as similar as possible to School Site One for ease of comparison and to report findings in like ways.

The first questions on the survey were related to the types of testing the students most commonly experienced. The results of the student surveys in the targeted classes indicated that out of 24 students, 14% of the students frequently had taken standardized tests, 50% of the students sometimes had taken standardized tests, 36% of the students rarely had taken standardized tests and 0% of the students never had taken standardized tests.

The parents responded with similar findings. They indicated that, out of 24 parent surveys, 47% of their students frequently had taken standardized tests, 41% of their students sometimes had taken standardized tests, 6% of their students rarely had taken standardized tests, 0% of their students never had taken standardized tests and 6% did not know. As with School Site One, the differences of the parental and student responses may be attributed to the lack of communication or understanding between parent and child with regard to assessment.

Thirty-five teacher responses to the surveys were similar in nature to the students with the exception of the types of tests they gave. The multiple responses teachers gave again did not statistically alter the findings.

The information presented as charts (See Appendix C) reveals that Site Two students seem to enjoy true/false tests more than any other type of test, and that short answer tests are given by teachers more often than other kinds of tests.

When asked about time studying, 65% of the students said they studied for tests less than one hour, and 82% felt mostly nervous or confused when they knew they were going to take a test.

The attitude survey (See Appendix D), revealed that a large percentage of the twenty-four students did not always like to attend school (70%), did not always use time wisely (73%), did not always like to read (91%), and did not always like to use new vocabulary words (88%). These students sometimes or never ask for help with their homework (72%), did not always ask for help with school projects (87%), sometimes or never follow directions in class (26%), and did not always bring work home for others to see (59%). The Site Two students sometimes or never talk about school activities at home (30%), did not always use the community library (78%), often or always have daily chores or responsibilities (69%), but did not always do those chores or responsibilities without being told (74%).

Traditional average grades from the 1995/96 school year in the targeted subject area of social studies were 81.2% for the first quarter, 73.7% for the second quarter, and 77.5% for the first semester. The first semester average for the 1995/96 school year was slightly above the accepted median grade average of 75%.

As with the results from Site One, the high level of student anxiety, the type of test questions the students and the teachers preferred, and the lack of student engagement as illustrated by student responses to the attitude survey, all display a need for a change in assessment procedures.

Probable Causes

Upon the examination of data from the targeted sites and probable cause from the review of the literature, traditional evaluation methods do not seem to effectively assess what students have learned, nor do they promote transfer of learning. Teacher comments from Sites One and Two such as, "Why give them a special test when they don't study for tests anyway," and "It's a lot easier to give the book test and have the machine score it," show that many teachers adhere to old methods of instruction and assessment. Additional comments from teachers revealed that many teachers did not know what authentic assessment was and what it entailed, that they felt that authentic assessment was too time consuming, that department restrictions inhibited them from creating their own forms of assessment, that they did not see the benefits in changing past procedures or methods, and, most importantly, that the necessary authentic assessment training was not given.

When teachers teach to traditional tests by providing daily skill instruction in formats that closely resemble tests, their instructional practices are both ineffective and potentially detrimental due to their reliance on outmoded theories of learning and instruction (Dietel, 1991). This traditional style of teaching does not address the needs of students, nor does it satisfy modern curricular requirements. Teachers still rely on traditional assessment methods, although these are inconsistent with the goals of an integrated curriculum. Educators need to understand that learning how and where information can be applied should be a central part of all curricular areas. Also, students exhibit greater interest and levels of learning when they are required to organize facts around major concepts and actively construct their own understanding of the concepts in a rich variety of contexts. Performance assessment requires students to structure and apply information, and thereby helps to engage students in this type of

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learning (Sweet,1993).

CHAPTER 3

THE SOLUTION STRATEGY

Review of the Literature

The lack of student engagement and poor assessment performance are problems with which many educators are concerned. Does increasing a student's ownership and class involvement with the curriculum promote a higher level of learning as evidenced by authentic performance assessment? And if so, how are these two components best accomplished?

An attempt to resolve these questions has resulted in a focus on two major areas:

1. Use of cooperative education.
2. Implementation of authentic assessment.

While these areas are not the only domains which need to be improved upon in most school settings, they certainly provide starting points which are well documented and can be implemented by using established procedures.

An area of concern with regard to the enhancement of student engagement and academic progress involves teacher change. Staff development must be a main focus to initiate this change. Even though staff development was not an action research component of this study, it is appropriate to mention it at this time because of its importance to the researchers. Staff development in the form of the Field-Based Masters Program provided the means for the researchers to institute real, meaningful, change within their respective classrooms, and the understanding of why this change was important.

Cooperative Education

The effective school concept is developed through the use of cooperative education or cooperative learning. Cooperative groups include two to six students of different ability, skill, motivation, gender or racial origins who work to achieve a single learning goal. In the cooperative classroom, the teacher uses a variety of structures and strategies to build on-task attention, trust and shared success. More than 500 research studies point out the benefits of the cooperative approach for all students (Bellanca & Fogarty, 1991). A study done in Kansas, with students who had mild disabilities, discovered that individual achievement, attitude, and project scores were consistent with expectations in relation to results for general education students (Newmann, 1996). The use of cooperative learning teams is a means of persuading students of different backgrounds and cultures to work together (Merryfield, 1995).

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Cooperative groups will be new to many students. In order for these students to be successful, they need to learn how cooperative groups work. Marcus and McDonald (1990) use the acronym BUILD to highlight the variables that produce power and success in cooperative groups. Many strategies are available, in each variable, for the teacher to use in order to design each cooperative lesson. The variables may be listed as follows:

B - Build in higher order thinking so students are challenged to think deeply and transfer subject matter.

U - Unite the class so students form bonds of trust.

I - Individual learning. Each student is accountable to master all skills and knowledge.

L - Look back and debrief what and how the students learned.

D - Develop students' social skills.

Individual teachers may use the BUILD components in an order which is better adapted to their own, individual situation.

Cooperative education will be new to many teachers. Even though most teachers now use a few components of cooperative learning within their current lessons, they may feel hesitant to what they perceive as a real, substantial change in their way of accomplishing their educational goals for student learning. But, as pressure mounts for a major modification in teaching strategy, attention to the opportunities provided by cooperative learning and thinking in the cooperative classroom increases (Bellanca & Fogarty, 1991).

A teacher who chooses to change from the traditional classroom setting to the cooperative setting, will see their role within that setting shift dramatically from one of being the person in charge of the students' learning, to one of being the person who helps the students become in charge of their own learning. Because the cooperative classroom develops student responsibility, promotes active learning, and facilitates student self-evaluation, teachers may actually find many of the typical classroom management tasks in the traditional setting are reduced or eliminated in the cooperative setting.

There is also a fair amount of hesitancy on the part of parents towards the change from traditional classrooms to cooperative classrooms and the use of cooperative learning. Kagan (1992) examines negative consequences of group grades in cooperative learning situations: they are unfair; they make report cards less meaningful; they undermine motivation; they send the wrong message; they violate individual accountability; and they create parental resistance. Costa (1992) says that through the collaborative group process, students develop a set of criteria, internalize those criteria, hold them in their head as they work together, and then rate their own and their group's performance. He goes on to say that the cooperative development of thinking - collaboratively developing concepts, visions and operational definitions - is used to guide, reflect upon and evaluate one's own performance while in groups or alone. This allows each teacher to develop each child's capabilities to the fullest. It allows them not to develop copycat products, but rather creative talents ready and able to transfer learning to a multitude of changing challenges (Bellanca & Fogarty, 1991).

Authentic Assessment

These continued change efforts in schools today must include curricular strategy involvement. Staff development more specific to performance based education must include the development of clear objectives and goals. As described by McTighe (1996), not only does assessment need to change, but also curricular and instructional strategies. A curriculum must be geared more towards desired performances of understanding, and not to what a student is required to learn. The instructor must develop performance oriented strategies to assess the demonstration of understanding. Performance based education should also directly involve the students in authentic work. It should not be limited to just the classroom. Practical application to the outside world should be a major objective. Students, as a result of authentic teaching, should be able to demonstrate the ability to take previously learned information and transfer these concepts to the world in a non-classroom setting. For example, the ability to demonstrate sentence structure identification is very specific to a classroom setting, but it is not well-connected to a skill such as persuasive writing in the business world.

Creating student ownership and increasing classroom engagement can be achieved by the introduction and application of authentic assessment. In the classroom, students must feel that their education is meaningful and worthwhile, and they must also feel the need to acquire more information.The student, as the consumer, must be included in this process.

Research cited by Grady (1994) discusses the questions pertaining to the changes that must be made in the classroom and whether or not students are being prepared for the future. This research deals with the creation of life long learners, problem solving adults, and preparing our children for the twenty first century. Comparisons are made between authentic teaching programs and traditional methods such as teacher lead classrooms, isolated student workers, standardized tests, student competitions through set grading curves, letter grades, single content area courses, strict focus upon the teaching processes, and the highly detailed curriculum. The components of an authentic program include cooperative student engagement, student produced information, the community as learning environment, assessment emphasis on demonstrations and portfolios, self measurements, the requirement of high quality work at all times, interdisciplinary teaching, individual time lines, focus on the learning processes, teachers as instructors, coaches, mentors, facilitators, and content outcomes supported by authentic tasks with multiple components. As the instructional focus shifts from teaching to learning, and the assessment focus from bubble sheets to performance, the nature of schooling and its delivery systems must also change (Grady, 1994).

Student assessment should be a reflection of the learning process. When teachers are using authentic teaching strategies, authentic assessment needs to be implemented as well. Assessment should be continuous and not separated from instruction. Authentic assessment describes real tasks that require students to perform and/or produce knowledge rather than reproduce information (Stefonek, 1991). Fixed response testing (multiple choice, True/False, short answer, etc...) does not evaluate student mastery of a topic. Current evidence about the nature of learning as stated by Dietel (1991), states that instruction which is purely based on drill and practice does a student a grave injustice.

Students need to use their new knowledge in the everyday world in order to know it. They need to have the opportunity to make decisions with real consequences (Nickell, 1993). Students should know what teacher expectations are, and how evaluation will occur, so that they can take responsibility for their own learning. As a solution, various methods of authentic assessment can be implemented in the classroom. Examples of authentic assessment, as described by Allen (1993), include portfolios, projects, presentations, journals, exhibitions, performances, and experiments. Challenging activities, as described by Wiggins (1989), are found in exercises which include conducting research, writing and revising papers, discussions of current events, and collaborating with others on a debate.

All of these methods evaluate authentic learning. They acknowledge that children learn best when actively involved, receive immediate feedback from peers and from their instructor, display ability to apply and transfer information, and are directly involved in the evaluation process. The concern that standardized tests do not accurately measure what is learned and do not include problem solving skills, metacognitive thinking skills, and student directed learning, increases the movement towards alternative forms of assessment. In an authentic classroom, students will acquire the concept of transfer. Without meaning, isolated facts and skills are soon forgotten. Authentic forms of assessment provide the student with a variety of tasks that create challenges. These authentic assessment tasks roles which help students rehearse for the complex ambiguities of life, instead of traditional tasks, which are more like drills which assess static and too-often arbitrary, discrete, or simplistic elements of those tasks. (Wiggins, 1989)

To facilitate authentic assessment and authentic learning, the

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classroom itself, and the resulting ambience within, needs to be learner centered. Kohn (1996) illustrates a self assessment strategy which can be used by teachers to determine if their classroom is teacher centered or learner centered. He cites possible reasons for concern such as a classroom which the teacher has set up for their own needs, rather than student needs, a room which is "cold" by student standards, and shows little of the students' involvement in the class. The arrangement of furniture, the use of student generated decorations, even the tone of discussion used in the classroom by students will give clues as to weather or not the classroom is learner centered or instructor centered. Once classroom logistics problems are taken care of, the teacher will have a better chance of success implementing an authentic style of teaching and the challenges which go with it. Authentic forms of assessment then provide the student with a variety of tasks which address these challenges.

However, according to Joyce et.al. (1992), students who are successful in the classroom as it has been run in the past, may be reluctant to having the rules changed, whether it be at the beginning of a new year or once the school year and rules have already been established. Students might become displaced and may exert pressure on the teacher to return to their old ways of running the classroom. The teacher must take the time to teach the skills necessary for the students to be comfortable in the authentic classroom.

Research cited by Grady (1994) asks the questions pertaining to the changes that must be made in the classroom and whether or not we are preparing our students for the future. With the twenty-first century quickly approaching, creating lifelong learners and problem solving adults should be the schools major focus. To accomplish this, today's teacher must encourage students to be engaged in their own learning, produce their own information, work cooperatively with other students, and produce high quality work. The emphasis should be on student success and curriculum to meet the needs of every student. Surprisingly enough, this should lead to an increase, not a decrease that most of today's teachers fear, in the amount of content that can be taught (Conley, 1992).

Project Outcomes and Solution Components

As a result of the use of strategies to increase student engagement and retention during the period of September 9, 1996 through February 21, 1997, the targeted social studies and health students will show an increased interest in their own learning, take an active role in the development of learning activities, and implement authentic assessment to gauge their learning progress.

In order to accomplish the terminal objective, the following processes are necessary:

1. Creation of a cooperative learning environment.
2. Implementation of authentic strategies and assessment instruments.

Action Plan for Intervention

The following steps will be taken to implement the intervention:

I. Create a cooperative learning environment.

A. Who

School Site One will be targeting two freshmen health classes consisting of 30 students each. The cooperative learning environment will consist of both informal task groups and base groups.

School Site Two will target a sixth grade class consisting of 24 students in the area of social studies. The cooperative learning environment will consist of both informal task groups and base groups.

B. Why

Cooperative learning will enhance student participation in the classroom. Students will be made aware that they can take ownership of their learning and improve their learning in the content areas.

C. What

Cooperative groups will be used in the targeted classes to teach social skills and academic content. Teachers will instruct students in the development of a working group. To do this, the following techniques will be used: think-pair-share, PMI, brainstorming, jig sawing, and team building.

D. When

The cooperative groups will meet 2 to 5 times per week, depending on the area of study. These meetings will all take place within the classroom in varying time segments.

E. How

Task grouping for Site One will be done in a variety of ways, including jig sawing, location and content areas. Base groups will be developed after approximately two weeks into the school year. These groupings will consist of 5-6 students based on gender, academic ability, social interaction, and random assignment.

Task grouping for Site Two will be done in a variety of ways, including content areas, ability, gender, jig sawing, and location. Base groups will be developed after approximately one to two weeks into the school year. These groupings will consist of 4-6 students based on gender, academic ability, and social interaction and random assignment.

The following steps will be taken to implement the intervention:

II. Implement authentic learning strategies and assessment instruments.

A. Who

School site one will target two freshmen health classes consisting of 30 students each. School site two will target a sixth grade class consisting of 24 students in the area of social studies.

B. Why

Authentic assessment describes real tasks that require students to perform and/or produce knowledge rather than reproduce information. A curriculum must be geared more towards these desired performances of understanding, and not to what a student is required to learn.

C. What

The authentic learning strategies will consist of a variety of activities which promote student engagement and retention. These exercises will include cooperative group activities, individual projects including surveys and research, audio visual presentations, and self generated learner ventures.

D. When

Authentic learning techniques will be used during the action research period of September 9, 1996 through February 21, 1997. Assessment instruments will be used during this same time, and will be implemented before, during, and after authentic lessons.

E. How

Authentic assessments will consist of rubrics, student generated assessment forms, self assessment instruments, group assessment mechanisms, portfolios, surveys, and traditional grading methods.

Methods of Assessment

Authentic assessments will consist of pre and post intervention surveys, assessment rubrics used for projects and presentations, self assessment instruments generated by students, group assessment instruments developed by base and task groups, portfolios of work generated during various learning tasks, and traditional grading methods using grades generated by other activities.

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CHAPTER 4

PROJECT RESULTS

Historical Description of Intervention

The objective of this project was to improve student engagement and raise assessment performance through the implementation of lessons which promote ownership and retention of learning, the creation of a cooperative learning environment, and the design of authentic assessment instruments.

Traditional lesson designs were changed using the BUILD technique (Marcus, 1990) as a model. Content areas remained the same in order to meet state goals. Methods of teaching and learning were adjusted as to facilitate student evaluation, enhance student responsibility, and to promote transfer. Cooperative learning was used to enhance student participation and engagement.

School Site One

At the beginning of the school year, it was apparent that students had worked in cooperative groups previously, but needed ski" refinement. It was also acknowledged that students had not been involved in their own learning.

Students were uncomfortable with any form of assessment that did not include objective questioning.

To acclimate incoming freshmen to our health program, a department overview of the course was presented at the beginning of each eighteen week semester. The overview consists of classroom procedures, expectations, and various school policies. Also during this orientation time, students were presented with a health syllabus and all evaluation procedures used throughout the semester. In addition, students were presented with a general "people search" (See Appendix E) to serve as an ice breaker.

Cooperative learning was immediately introduced to the students in early September. The students were taught basic guidelines and procedures used in cooperative group work. The BUILD model was stressed to further enhance the procedures needed. These elements included higher order thinking, uniting of the group members, individual accountability, individual self-evaluation, and the development of social skills. Each of these areas was retaught as needed throughout the semester.

The methods used to establish the cooperative task groups varied depending upon the activity. The variety of methods included, jigsaw pieces creating a vocabulary word or some type of picture, counting off by numbers, and by location of student seating. During any cooperative learning session, students were given guidelines to follow, and during each lesson, roles were assigned along with specific instructions towards the task at hand. Depending upon the assignment, five to six students were assigned to a group. After approximately two weeks, heterogeneous base groups were created by the instructor. These groups were established after close observation of academic progress, class participation, leadership qualities displayed, attendance, discipline infractions, and general social interaction.

In cooperative groups, students were first given basic team building type activities. For example, early on in the semester, each group was presented with a word scramble handout entitled "Challenge Your Mind" (See Appendix F). Another activity used included a series of introspective questions that involved each student to discuss personal feelings and opinions. This activity was entitled "What" (See Appendix G). These types of activities served as a good introduction to group learning, so each student had to share some personal feelings and display a modicum level in problem solving skills.

Authentic teaching was one of the main focuses in this action research project. During the semester, while teaching various health topics, many techniques were implemented to accomplish the action plan. Cooperative group learning was incorporated in weekly lesson designs, including various authentic strategies.

Many lessons included the jig sawing of information. Chapters, related terms, and assigned topics were broken down into parts and later reassembled as a class. For example, during a nutrition unit, students in cooperative groups were given the task to create portions of the "food pyramid" (See Appendix H). Previously, students were asked to bring in various pictures of the foods pertaining to their assigned food group, and these were then attached to poster paper. In addition, each group was given an instruction sheet with specific dimensions for their piece of the puzzle, which required measuring and cutting. Later, each puzzle piece was assembled, which created the finished product displayed in the classroom.

Another example of jig sawing included the breaking down of a chapter. In cooperative groups, the students were assigned a section of the chapter. Each group, using poster paper and markers, created an outline of their section. Upon completion, each group then presented their finished product to the class. Later the students walked around the room taking notes from each group outline. This strategy was used at the beginning of a new unit as a good introduction to new information.

Authentic teaching also included a variety of graphic organizer strategies. Some of the organizers used included, Venn diagrams (See Appendix I) for comparing and contrasting of information, learning at right angles (See Appendix J) for inference, and webs/mapping (See Appendix K) for the organization of information and attributing. A sexuality unit involved a Venn diagram where students, while working in groups, compared and contrasted viral diseases to bacterial diseases. On several occasions, students were given a copy of the graphic organizer the day before the cooperative group lesson was due as homework. This procedure was used due to time restraints depending upon the lesson, and seemed to result in a more complete final group product.

After using authentic teaching strategies, authentic assessments were used to determine student progress toward local exit goals. In some units, students chose which form of assessment they would use. In other units, the teacher made the choice of assessment forms.

At the beginning of each unit, students were asked to fill out an entrance card (See Appendix L). These reflective writings were used to determine what was review material and what information still needed to be discovered by the students. These entrance cards were especially helpful in the Drug/Alcohol unit and the Human Sexuality unit. These are two areas where students come in with not only a lot of information, but also a great deal of misinformation.

Three or four day journals were kept by the students for some units that required decision making skills. The journals ranged from as simple as keeping track of everything they ate for three days (See Appendix M), to a Lifestyle contract (See Appendix N) reflecting on how difficult it is to break a habit.

In the area of Health education, there are many excellent educational videos that can be used. Students became accustomed to note taking and various types of metacognitive activities that were used in connection with assessing student learning through videos. KWL's (See Appendix O), what is Known, what one Wants to know, and what one has Learned, were used as study guides for various lessons. Students would write out what they thought they already knew about the subject, and what things they were curious about. After viewing the video, the students reflected on what they had learned and what they still needed to find out. In other video lessons the students used PMI charts (See Appendix P), Plus, Minus, and Interesting, to discuss what they had learned about the topic. The students would write things they enjoyed or liked about the video, then they would write what they disliked or thought was not right in the video. The final section was for the students to put down what they felt was interesting, which may have had nothing to do with what they learned, but rather their own feelings.

Students were aided in their reading and comprehension by using guided reading worksheets. These were sometimes teacher made, and sometimes came from workbook material. Students were instructed in how to use these opportunities as a review of what the key points of the reading were. Assessment points were given for correctly completing the guided reading activity.

It is well known that different people have different learning styles. The theory of multiple intelligences (Gardner 1983) suggests that we should teach and assess students in their own strengths. Several of the assessments given to the targeted Health classes allowed students to choose which form of assessment fit their learning styles. These assessments included such things as writing a song, drawing cartoons, creating a 3- dimensional object, writing, research, keeping a mathematical log, surveying people, and role playing. Students were given rubrics on how they would be assessed. Each project was given equal point value to that of a unit test that would have been given in the past.

Projects and other forms of assessment were not the only forms of assessment. The teachers/researchers felt that teacher made tests can also be authentic. These tests consisted of matching questions, corrective true/false, short answer, and graphic organizers such as Venn diagram or webs.

Portfolios were used on a biweekly basis. Students were given a portfolio assessment form (See Appendix Q) two days before each due date. Students were required to fill in the assignments due and check off the assignments that they had completed and then had two days to complete any missing assignments. Included in the portfolio were assignments, movie notes and organizers, project grade sheets, extra credit articles, and any handouts given during the two week period. Portfolios were to be kept up to date and and parent signatures were required if the portfolio was below 80% complete.

School Site Two

To help students understand the concept of cooperative education and the many new concepts they would be experiencing during the new school year, base groups were established during the first week of September. The groups formed were heterogeneous in nature and consisted of four groups of six students each for a total of 24 students. Although many students within these groups were well acquainted with each other, it was felt that all students needed to participate in activities which would allow them to get to know each other on a more personal basis. A "Back to School Scavenger Hunt" (See Appendix R) was held. Students were hesitant at first, but greatly enjoyed the social interaction as the exercise went on.

Students also filled out a "Player Data Sheet" (See Appendix S) which, along with their picture, would be displayed on a prominent bulletin board within the classroom. After the pictures were taken, an explanation of class roles and jobs was given. The roles ran the gamut from weather reporter to sports reporter to lunch ticket manager.

Surveys were also filled out at this time. The surveys (See Appendix T), intended to be filled out by parents were sent home with the students, and teacher surveys were disseminated throughout the site.

In addition, students were introduced to daily "Trivia Challenges". These "fun" contests were done individually, at first, with the intent to have them solved cooperatively as groups learned how to operate.

As an introduction to the group process, it was decided that the students should have a class name. It was interesting to see the almost total lack of organization exhibited during this procedure. A suggestion was made that maybe the class should have a specific policy as to how a group decision would be made. The class developed "Rules for Group Work" (See Appendix U), and each student received a copy. These rules were practiced at all times when students were in any kind of group situation. This reinforcement allowed a more rapid understanding of why certain group protocols were necessary.

After the basic essentials of cooperative education were presented to the class, authentic learning activities were introduced along with traditional methods of instruction, with the daily trivia challenges, and weekly "Jeopardy" style contests between groups, as a way to further reinforce group procedures.

After a foundation had been set for the cooperative education component of the project, authentic learning and assessment was applied to the existing curriculum. The BUILD (Marcus & McDonald, 1990) method

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was used to adapt lessons in order to facilitate the strategies used to increase student engagement, and the transference of learning. The development of students' social skills, the "D" in the BUILD model, was one section that was worked on during all phases of the project.

The first major authentic activity was a project that required the study of ancient Egypt. Lessons were changed from ones which consisted of answering questions and defining words from the textbook to an extensive list of possible activities that could be chosen according to a students ability and interests (See Appendix V). These activities made use of multiple intelligences, and also gave students the option of working in groups or developing their own exercise.

As the students were doing research and working on their projects, task groups were formed to jig saw information learned from daily reading and discussion. These groups also completed a KWL "Pyramid Chart"about ancient Egypt. These charts, on large roll paper, were shaped like pyramids and listed what students knew about ancient Egypt, and what students wanted to know about ancient Egypt. The "learn" component was saved for as an assessment instrument at the end of the unit.

Another component of the "Egypt Project" was the study of two videos about ancient Egypt. Students individually wrote down study questions about information learned from the videos, and used their task groups to combine questions. After completion of these questions, a member of each group got together and formed a "super task group" to combine the questions from each individual group into an authentic test based upon the videos.

Groups made use of technology in another way by using computers to explore CD-ROMs about Egypt. Four multimedia computers were set up as stations for each task group to use. The computers had different Egyptian themed CD-ROMs installed, and the groups spent an hour at each station before rotating to the next station. The CD-ROMs gave facts, figures, pictures, and animations about Egypt, took students on an ancient tour of the Nile River, showed how mummies were made, and took students into the Great Pyramid of Cheops where they had to solve a series of puzzles to get back out. A word map (See Appendix W) was used with Egyptian terms, a PMI chart was used to gauge students' involvement and interest, and a group evaluation (See Appendix X) was completed at the end of the exploration.

As students progressed with their Egypt projects, they were also involved in other authentic activities such as using programs on the computer to make word searches and crossword puzzles from social studies vocabulary words. These exercises further strengthened the students' cooperative skills, as well and gave them valuable computer practice.

In addition, students constructed a book using pages from an Egyptian coloring book, which gave them an opportunity to keep a record of their progress. A simple checklist (See Appendix Y) assessed their progress, with traditional grading to follow.

The end of the ancient Egypt unit involved the assessment of projects (See Appendix Z), the completion of the KWL charts, and two BUILD activities. The first of these activities (See Appendix AA), had each group decide what was most important to ancient Egyptians. The second (See Appendix BB), had students formulate "fat" and "skinny" questions to be used as a final test assessment for the unit.

The students' next major task was a student written play illustrating the "Code of Hammurabi". Student task groups developed ideas, assigned roles, and made simple scenery to be used in their productions. The plays were evaluated by other groups using an assessment rubric (See Appendix CC), and were also videotaped (See Appendix DD).

Another, more elaborate, learning activity was a research project called "Adopt A Country". In this assignment, students were randomly assigned a country of the world upon which to write a report. These reports would be researched over a span of about six weeks. Students worked individually during the week, and with other sixth graders in small, cooperative groups according to country chosen, on Friday afternoons. The assignment also involved cooking a sample of food native to their country, wearing a costume to the sixth grade "Food Fest", and sampling the representative foods from the other countries. All project components were evaluated by a checklist (See Appendix EE), and number grades were assigned accordingly.

During this research project and on into the rest of the school year, students continued their work in other subjects, and their weekly "En Passant" trivia challenge in current events for social studies. Base groups of six students competed against the other class base groups, and the best groups earned extra credit in Social Studies.

A unit on the Middle Ages provided the opportunity for students to research a different period in history. KWL charts provided a means to evaluate student interests. A major area of interest was the construction of castles and cathedrals. The students learned about how castles and cathedrals were built using a number of sources including computer multimedia resources, books, and charts. The students then developed study questions, and worked these questions into a study question worksheet (See Appendix FF) for each area. These worksheet "quizzes" were completed cooperatively in small task groups.

In order to more fully study the continent of Africa, student task groups read about one of the four main African geographic regions. This information was presented in a variety of ways including a short play, a rap song, and a poem. The presentations were jig-sawed with the others, and each group evaluated the other groups with an evaluation instrument (See Appendix GG).

Students also learned about types of African masks and their purposes. As a related art project, students constructed their own masks (See Appendix HH), and wrote stories about the masks explaining their origin, and use (See Appendix II). These projects were evaluated using a student generated rubric (See Appendix JJ), and traditional grading methods for the written story.

Presentation and Analysis of Results

For ease of comparison of the results of the interventions, the same tools were used in September and re-administered in February. The results are explained by site.

School Site One

Students adapted readily to the authentic learning style. They expected and asked for entrance cards if they were not given. Not all students were at the same level of knowledge in the units but, with entrance cards, the teacher can decide where to begin the area of study. It is nice for the teacher to not worry about boring the students with previously learned material. It also helps the teacher dispel myths that the students may have brought into the class with them. By the end of the semester, the students filled the cards with little trouble and few questions.

When it comes to journals, students were a bit turned off. Student comments ranged from, "I don't want to do this.", and "This is too much trouble.", to "We already do this in English class. Why do we have to do it in here?". In these classes, daily journals were not kept. However, certain areas of study lent themselves to journals. Because it was not done on a daily basis, students had trouble remembering to write things down. It sometimes took two or three tries to get some students to get it right. Weekends did not lend themselves to the completion of journal entries. When moved to three days during the school week, the recording of a food diary went much more smoothly. Analysis of what the students ate and metacognition about their diet came more easily.

Throughout the intervention, cooperative group strategies showed a noticeable improvement. Students displayed positive social skills, such as a sense of teamwork, and a much improved finished product. During the semester, the basic procedures for group learning had to be rehearsed and refined with each unit, but as the intervention went on, less time was spent in this area and more time was dedicated towards the specific task at hand. Social skill enhancement seemed to be the area that had to be retaught the most often. At the beginning, the overall tone of the groups involved a certain level of arguing, and or personal put downs. It seemed that once the students accepted and respected each other, the various lessons went much more smoothly in comparison to earlier efforts.

Another area of improvement dealt with the concept of time. The students, when given a cooperative group assignment, displayed an improved effort in the area of following directions and task completion. Each assignment was completed within the allotted time and specific tasks were done properly. The simple procedure of assigning and carrying out group roles at the beginning took approximately five minutes, in comparison to the recommended one minute as later observed. Also, students seemed to take more pride in, and had a better understanding of their assigned role as a part of the collaborative group effort.

The students still needed some improvement in the presentation of the finished product to the class. Although some visible improvement did surface, the students, when assigned the presenter role, quite often read from their projects while facing the board, as opposed to making eye contact with the class. As an adjustment to the cooperative group methods, the presenter role may be assigned at the end of the period to help increase student accountability.

Another area where the targeted classes needed improvement was note taking. KWL's and PMI's made this task more acceptable to the students. The task was broken into smaller pieces, and the students responded by taking quality notes instead of just writing down information. The students metacognition was evident, especially in the PMI, where they could choose to write down anything they found interesting about a topic. KWL's were not always met with a favorable response by the students. The students claim that every teacher they had since second grade had them doing KWL's. Once it was understood that the KWL's were a form of review for the students and an indicator of students' prior knowledge for the teacher, and that questions would be answered, students used the KWL without many complaints.

Students post surveys (See Appendix KK), showed an increase in the percentage of authentic type tests students said were given by teachers from 27% to 35%, and an increase in the amount of students who liked more authentic type tests from 1% to 10%. There was also an increase in the amount of time spent studying for tests from 80% to 85%, and an increase in the percentage of students who felt confident and relaxed before a test from 57% to 60%. The percentage of students who felt nervous before a test decreased, going from 32% to 30%.

Student attitudes toward themselves and school improved in many areas (See Appendix LL). A higher percentage of students said they often like to attend school (1% increase), often use their time wisely (3% increase), often or always like to read (3% increase). The students sometimes use new vocabulary words (3% increase), ask for help with homework and projects (4% increase), often follow directions in class (2% increase), sometimes or often bring work home for others to see (5% increase), and sometimes talk about school activities at home (3% increase). They sometimes or often use the community library (3% increase), and often do their chores and fulfill their responsibilities without being told (2% increase).

Traditional average grades from the 1996/97 school year in the targeted subject area of health were 77.2% for the first quarter, 78.7% for the second quarter, and 77.9% for the first semester, an increase of 7.4 percentage points over the same period during the 1995/96 school year.

School Site Two

It was clear, at the onset of the project, that the students were not comfortable with the areas of cooperative education and authentic assessment. They had little or no background in the particulars of working within cooperative groups, and the idea of forming their own evaluation instruments was completely foreign to them.

Even though cooperative group procedures were instituted during the first weeks of the school year, it took many more weeks of practice and reinforcement before most of the students began to understand the reasons why cooperative learning would be of help to them. Class dynamics required that task groups be continually changed. Students frequently tried to "buddy up" with close friends, unaware of the idea that their partners should have something to add to the group. These group formations had a way of making the social aspect of the group the top priority, and making the task part of the group a secondary activity.

As the school year progressed and the research project unfolded, students began to more fully understand the mechanics of group learning, and began to see the group as an opportunity to help them with areas they didn't feel comfortable with. The base and task groups sometimes had the flavor of the "one room schoolhouse", with the more competent students helping those who were less competent.

Even though the arguing within groups never really dissipated, it became less of an attack, and more of a way to express opinions and solve problems. In the beginning there were frequent disagreements about role assignments, amount of work contributed, staying on task, and the final group product, but these disagreements became more helpful in nature later in the school year. Most students began to realize that if the group did well, then they would do well, and that degrading a group member was, in effect, degrading themselves. Even so, a small number of students continued to assign blame, instead of seeking solutions to group problems. It seemed as if no amount of discussion on the matter helped them to understand the damage they were doing to the group with their negativity.

The authentic assessment sections of the project elicited a somewhat more positive reaction from the students than the traditional method of assigning letter grades. Once they had reformulated their thinking in order to accept the idea that their assessments meant more to them than just a grade, their excitement and enjoyment of school seemed to increase.

Traditional letter grades were not entirely abandoned. They simply were used in conjunction with the authentic assessment instruments to better chart the students' progress, and their personal involvement and engagement with the lessons and tasks.

Students post surveys (See Appendix MM), showed an increase in the percentage of authentic type tests students said were given by teachers from 10% to 32%, and an increase in the amount of students who liked more authentic type tests from 5% to 23%. There was also an increase in the amount of time spent studying for tests from 67% to 70%, and an increase in the percentage of students who felt confident and relaxed before a test from 18% to 26%. The percentage of students who felt nervous before a test decreased, going from 77% to 64%.

Student attitudes toward themselves and school improved in many areas (See Appendix NN). A higher percentage of students said they always like to attend school (6% increase), always use their time wisely (8% increase), and always like to read (18% increase). The students always use new vocabulary words (8% increase), often or always follow directions in class (8% increase), often or always bring work home for others to see (7% increase), and often or always talk about school activities at home (6% increase). They often or always use the community library (5% increase), often or always have daily chores or responsibilities (4% increase), and always do their chores and fulfill their responsibilities without being told (6% increase).

Traditional average grades from the 1996/97 school year in the targeted subject area of social studies were 87.4% for the first quarter, 76.6% for the second quarter, and 82% for the first semester, an increase of 4.5 percentage points over the same period during the 1995/96 school year.

Conclusions and Recommendations

School Site One

The targeted ninth grade health classes were excellent examples of how students taught using authentic methods can become excited about learning even the most difficult of materials. Students do not have a chance to become bored or disengaged when each lesson involved participation in some form. Students were able to come to class with a more positive attitude because they were the ones responsible for what was happening.

Post-intervention surveys indicated that students were more likely to bring work home to show others and also asked for help more often.

Students felt that they used class time more wisely and believed that they were following directions given in class more often.

Students came to class on time and would ask about the daily activities. It was clear that students had become more involved with class activities and school as a whole. Students felt pride in their work as shown in the quality of that work and their achievement. This pride resulted in excitement and interest in each lesson. Student grades showed a marked increase over the same time period the previous year thus showing a positive relationship between authentic methods and student engagement.

While students learning improved, teachers preparation time increased. Scantron tests are graded much more quickly than individual projects. However, with practice and the use of rubrics, teachers can effectively manage the increased paper load. The various projects produced by the students added new knowledge for the teachers and became enjoyable to grade. There was an enormous amount of sharing of ideas and student work.

It was helpful that other teachers at the site had recently become interested in authentic assessment. As a group, it became more exciting to see what assessing authentically could do for a class. It also allowed for networking among the various teachers to take place. Without this networking, the task of authentic grading could have been overwhelming.

Also, if the other teachers had not shared in the assessments used, students in the targeted classes may have felt that they were doing much more work than the other students.

Student and parent comments at the end of the semester were very positive. Parents could not believe that their students enjoyed health class so much. One parent said her child came home every day with stories of what went on in class. Students said they really did not realize that they were learning as much as they did until it was time for the final exam. Because of time constraints and local assessment responsibilities, the final was a machine graded test. This did not set well with the targeted students. They did survive and did well on the test.

Authentic methods are being continued with this semesters's classes at Site One. New things have been added and some former assignments have been revamped to make them better. Authentic teaching is an ongoing process. The students are doing well and the teachers are excited to teach. Everyone has gained from this project.

Site Two

Upon analysis of the data, it was found that, due to the intervention, a learning environment was created in which students became more engaged with school and their education, and achieved a higher degree of mastery as proved through authentic assessment instruments.

The responses students made to the survey questions revealed that they felt more comfortable about attending school, and had an increased enjoyment of what was going on in class once they got there. They also were more inclined to share this excitement with others, and felt more positive about wise use of time, reading, following directions, using the library, and completing given tasks and responsibilities at home. These positive responses indicated that the students were more involved with educational activities, and were, thus, more engaged with their education.

The participation by students in cooperative groups provided a different means to pursue projects, areas of study, and traditional exercises. This was done in a way which allowed each student to get extra help from peers, and this learner interaction resulted in better mastery, retention, and transfer of learning.

The greater degree of student involvement with class, and school in general, was also evidenced by the high quality of student work and achievement. Authentic teaching and assessment mechanisms resulted in greater student interest, and these products showed an increase in overall assessment performance. Student scores, based upon traditional grades at the end of the first quarter, second quarter, and first semester, were higher overall than grades for the same time period during the prior year. This points to a positive relationship between authentic teaching and assessment, and indicators of student performance.

The positive effects of the research do not come without a cost. Students, as well as teachers, must be willing to make a commitment to cooperative learning, authentic teaching and assessment, and all ideas which go along with both of them. Teachers usually are somewhat reluctant to change methods which they perceive as effective, even though research points to the contrary. Students are equally reluctant to try new ideas, and see these concepts as "...just more things to do".

These negative ideas became apparent as the intervention continued. In the beginning, students were unwilling to go along with the program. As they warmed to the new ideas, it was increasingly difficult to adapt the curriculum to the new way of doing things. Teacher fatigue increased and creativity decreased as students "demanded" more hands on activities. It became apparent that a support group of teachers, each pursuing the same intervention but not present during this project, would have helped to lessen the fatigue.

Students also began to dislike their work in some of the task groups. Comments such as "Not groups again", and "I want to do this by myself", began to be heard on a more regular basis.

Proper planning and support through in service would have better prepared all those connected with the intervention. It is obvious that training on a continuing basis is necessary for successful implementation of cooperative learning and authentic assessment.

The implications for improved education are clearly positive if only teachers will be willing to "get the ball rolling". The true catalyst for change is the classroom teacher. If teachers make a truly sincere effort, along with administrators who give teachers support in the form of staff development, they will find that their entire concept of teaching and learning will change for the better.

REFERENCES

Abbott, J. (1996). Sharing craft knowledge: The soul of principal peer assessment. *T.H.E. Journal, 24*, 97-100.

Allen, J., Sugarman, J., & Cogan, M. (1993). How to make authentic assessment work for you. *Instructor, 21*, 66-68.

Ascher, C. (1990). *Can performance-based assessments improve urban schooling*? ERIC Clearinghouse on Urban Education, New York, N.Y., Digest Number 66.

Bellanca, J. and Fogarty, R. (1991). *Blueprints for thinking in the cooperative classroom*. Palatine, IL.: Skylight Publishing.

Bowers, B. (1989). *Alternatives to standardized educational assessment*. ERIC Clearinghouse on Educational Management, Eugene, Or., Digest Series Number 40.

Burke, K. (1994). *The Mindful School: How to assess authentic learning*. Palatine, IL.:IRI/Skylight Publishing.

Calfee, R. (1994). *Authentic assessment of reading and writing in the elementary classroom*. Elementary School Literacy: Critical Issues, 211-226.

Chapman, C. (1993). *If the shoe fits...: How to use multiple intelligences in the classroom*. Palatine, IL.: IRI/Skylight Publishing.

Conley, D. (1992). *Some emerging trends in school restructuring.* ERIC Digest, Number 67.

Costa, A., Bellanca, J., & Fogarty, R. (1992). *If minds matter: A forward to the future*. Palatine, IL.: IRI/Skylight Publishing.

Crotty, E. (1994). The role of cooperative learning in an authentic performance assessment approach. ERIC Digest Number EJ493926.

Dietel, R., Herman, J., & Knuth, R. (1991). What does research say about assessment? New Leaders for Tomorrow's Schools, 17, 18-23.

Egeland, P. (1996). Pulleys, planes and student performance. Educational Leadership, 54, 41-45.

Elliott, S. (1995). Creating meaningful performance assessments. ERIC Digest Number E531.

Fogarty, R. (1992). Teaching for transfer. In Costa, A., Bellanca, J. & Fogarty, R. (Eds). If minds matter: A forward to the future. Vol.1(pp. 211-224) Palatine, IL.: IRI/Skylight Publishing.

Fogarty, R. (1994). Teach for metacognitive reflection. Palatine, IL.: IRI/Skylight Publishing.

Gardner, H. (1993). Frames of mind: The theory of multiple intelligences. New York: Basic Books.

Geocaris, C. (1996). Increasing student engagement: A mystery solved. Educational Leadership, 54, 72-75.

Grady, J. (1994). Authentic assessment and tasks: Helping students demonstrate their ability. NASSP, 78, 92-98.

Hartenbach, D., Ott, J., & Clark, S. (1996). Performanced-based education in Aurora. Educational Leadership, 54, 51-55.

Haury, D. (1993). Assessing student performance in science. ERIC Digest Number ED359068.

Hughes,S, (1993). What is alternate/authentic assessment and how does it impact special education? ERIC Digest Number EJ482751.

Joyce, B., Showers, B. & Weil, M. (1992). Models of teaching. Boston: Allyn & Bacon.

Kagan, S. (1992). Cooperative learning. San Juan Capistrano, CA.: Resources for teachers.

Kane, M., and Khattri, N. (1995). Assessment reform: A work in progress. Phi Delta Kappan, 77, 30-32.

Klauke, A. (1989). Restructuring the school. ERIC Digest series Number EA37.

Kohn, A. (1996). What to look for in a classroom. Educational Leadership, 54, 54-55.

Kress, R. (1988). Critical thinking skills and teacher education, ERIC Digest Number 3-88.

Lake County Census Plus. (1990).

Lake County Planning and Zoning. Village of Antioch. Number 019, (pp. 2-3).

Latchaw, J. (1995). Assessment and community. ERIC Digest Number ED385839.

Mann, D. (1995). Can teachers be trusted to improve teaching? Phi Delta Kappan, 77, 86-88.

Marcus, . and McDonald, . (1990). Tools for the cooperative classroom. Palatine, IL.: IRI/Skylight Publishing.

McTighe, J. (1996). What happens between assessments? Educational Leadership, 54, 6-12.

Meisels, S. (1996). Using work sampling in authentic assessment. Educational Leadership, 54, 60-65.

Merryfield, M. (1995). Teacher education in global and international education. ERIC Digest, Number ED384601.

Newmann, F. (1996). Success. not productivity. *New Leaders for Tomorrow's Schools, 20*,19-23.

Nickell, P. (1993). *Alternative assessment: Implications for social studies*. ERIC Digest, Number ED 360219.

O'Neil, J. (1994). *Making assessment meaningful*. Association for Supervision and Curriculum Development, 36, 4-6.

Parke, C. and Lane, S. (1996). Learning from performance assessments in math. *Educational Leadership, 54*, 25-29.

Staff Directory. (1995). Antioch Community High School. Antioch, IL.

Staff Directory. (1995). Raymond Ellis Elementary School. Round Lake, IL.

State School Report Card. (1995). Antioch Community High School. Antioch, IL.: School District 117.

State School Report Card. (1995). Raymond Ellis Elementary School. Round Lake, IL.: School District 116.

Stefonek, T. (1991). *Alternative assessment: A national perspective.: Policy Briefs*. Number 15 &16. Oakbrook, IL.: North Central Regional Educational Laboratory.

Student/Parent Handbook. (1995). Antioch Community High School. Antioch, IL.

Sweet, D. (1993). Performance assessment. *Education Research Consumer Guide*. ED/OERI 92-38.

Wiggins, G. (1996). *The case for authentic assessment*. ERIC Digest, Number ED328611.

Wiggins, G. (1996). Practicing what we preach in designing authentic assessment. *Educational Leadership, 54*, 18-25.

Wiggins, G. (1989). Teaching to the (authentic) test. Educational Leadership, 47, 41-47.

APPENDIX A

SITE ONE

PRE INTERVENTION TEST SURVEY CHARTS

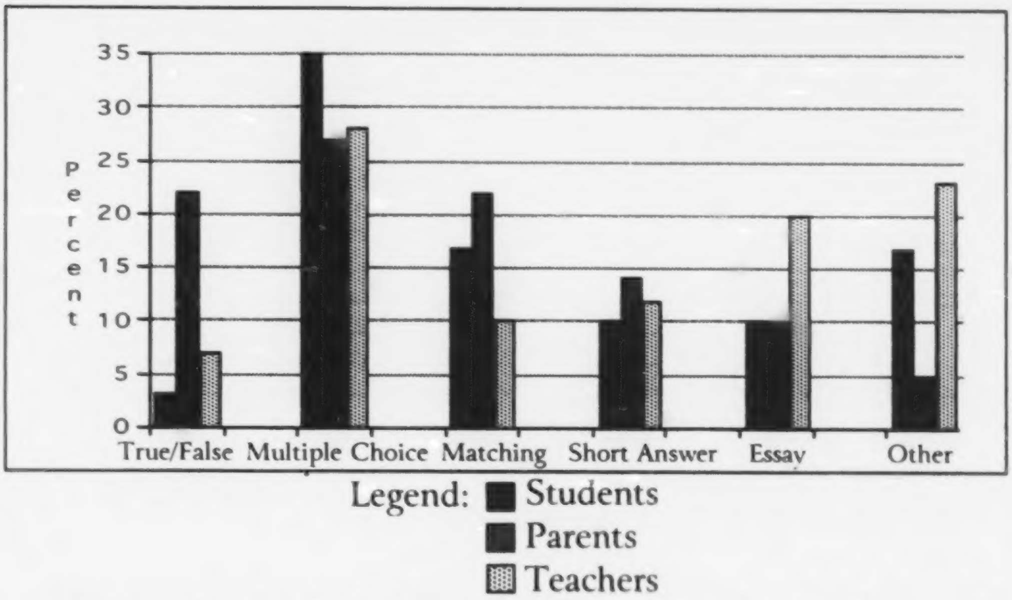

Figure 1. Results of the survey question: What types of tests are usually given in your classes?

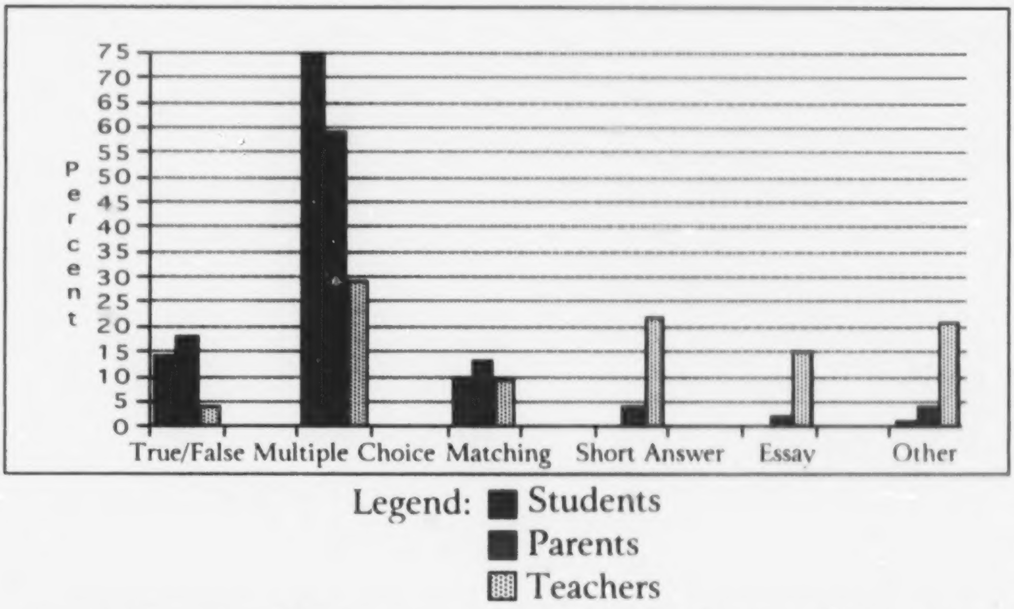

Figure 2. Results of the survey question: Which type of test do you like the best?

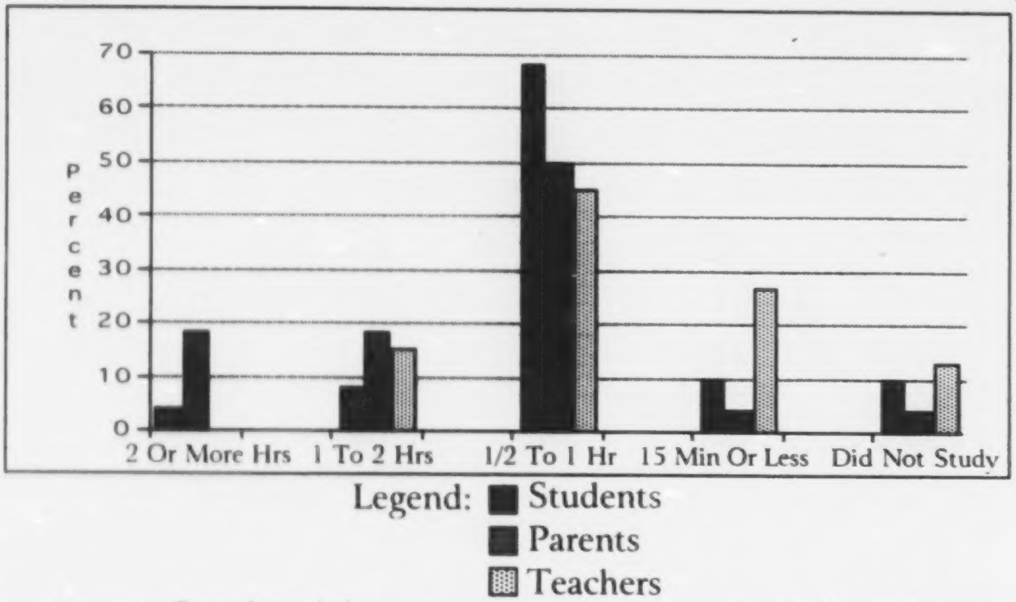

Figure 3. Results of the survey question: How much time do you spend studying for tests?

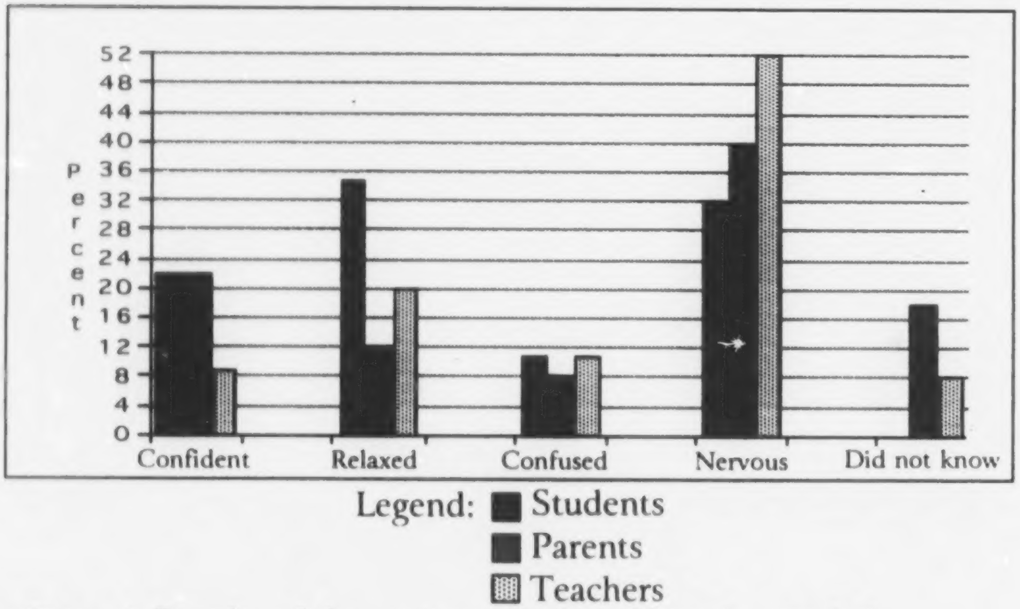

Figure 4. Results of the survey question: How do you feel when you have to take a test?

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APPENDIX B

SITE ONE

PRE INTERVENTION ATTITUDE SURVEY CHARTS

STUDENT SURVEY

NAME____

Circle the response which best describes what you think.

1. I like to attend school.

Never Sometimes Often Always

2. I use my time wisely.

Never Sometimes Often Always

3. I like to read.

Never Sometimes Often Always

4. I try to use new vocabulary words.

Never Sometimes Often Always

5. I ask for help with my homework.

Never Sometimes Often Always

6. I ask for help with school projects.

Never Sometimes Often Always

7. I follow directions.

Never Sometimes Often Always

8. I bring work home for others to see.

Never Sometimes Often Always

9. I talk about school activities at home.

Never Sometimes Often Always

10. I use the community library.

Never Sometimes Often Always

11. I have daily chores or responsibilities.

Never Sometimes Often Always

12. I do my chores and fulfill my responsibilities without being told.

Never Sometimes Often Always

APPENDIX C

SITE TWO

PRE INTERVENTION TEST SURVEY CHARTS

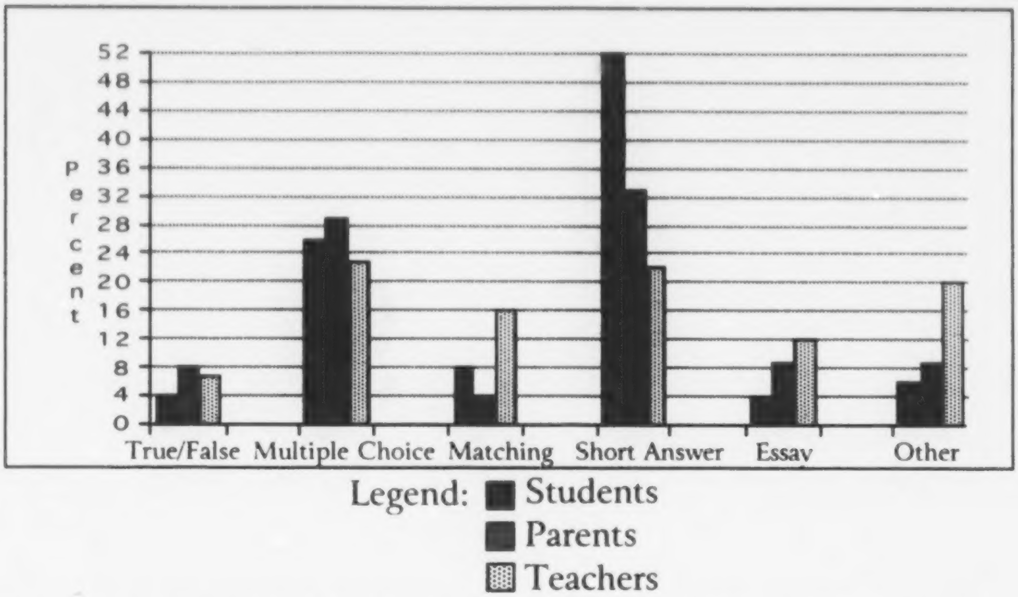


Figure 5. Results of the survey question: What types of tests are usually given in your classes?

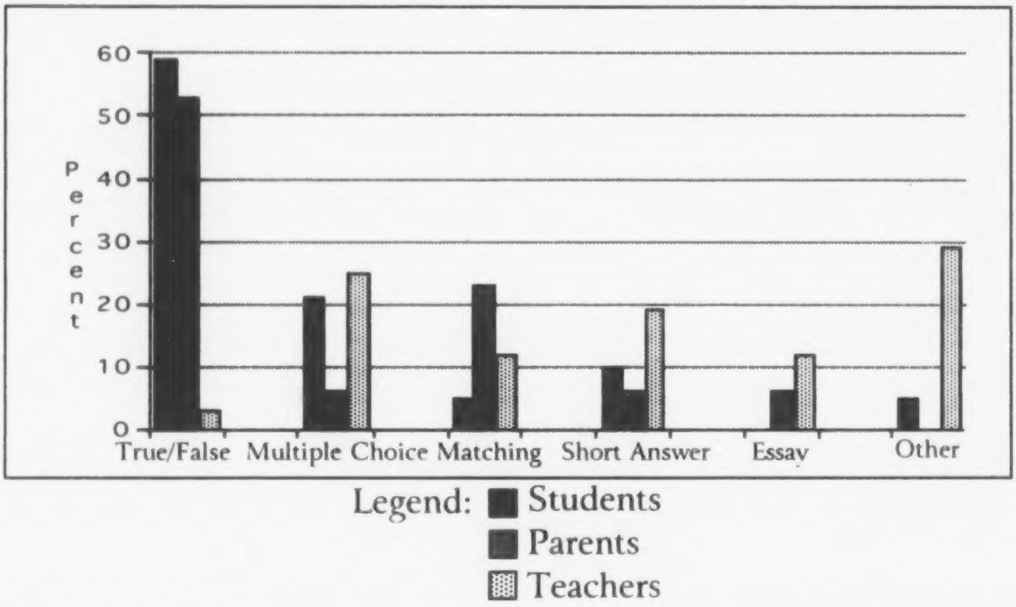
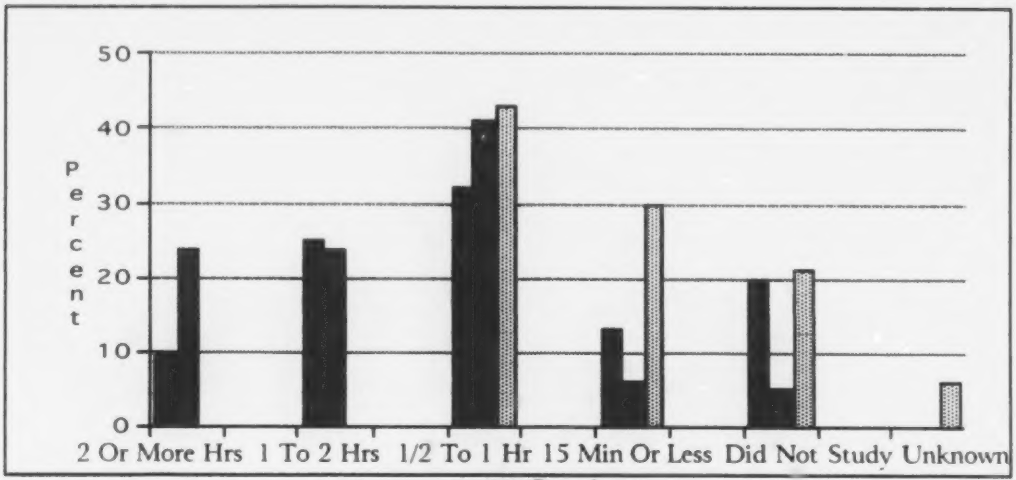
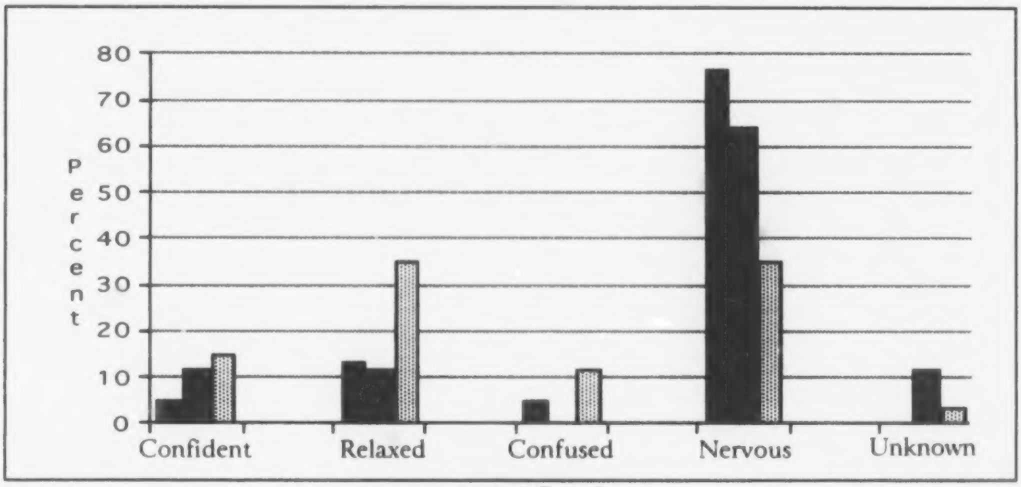


Figure 6. Results of the survey question: Which type of test do you like the best?



Legend: ■ Students
■ Parents
▨ Teachers

Figure 7. Results of the survey question: How much time do you spend studying for tests?



Legend: ■ Students
■ Parents
▨ Teachers

Figure 8. Results of the survey question: How do you feel when you have to take a test?

APPENDIX D

SITE TWO

PRE INTERVENTION ATTITUDE SURVEY CHARTS

STUDENT SURVEY

NAME ____

Circle the response which best describes what you think.

1. I like to attend school.

Never Sometimes Often Always

2. I use my time wisely.

Never Sometimes Often Always

3. I like to read.

Never Sometimes Often Always

4. I try to use new vocabulary words.

Never Sometimes Often Always

5. I ask for help with my homework.

Never Sometimes Often Always

6. I ask for help with school projects.

Never Sometimes Often Always

7. I follow directions.

Never Sometimes Often Always

8. I bring work home for others to see.

Never Sometimes Often Always

9. I talk about school activities at home.

Never Sometimes Often Always

10. I use the community library.

Never Sometimes Often Always

11. I have daily chores or responsibilities.

Never Sometimes Often Always

12. I do my chores and fulfill my responsibilities without being told.

Never Sometimes Often Always

APPENDIX E

SITE ONE

ICE BREAKER

READY,
SET,
GO!

FIND SOMEONE WHO.....

	WAS A GIRL SCOUT	LIKES COUNTRY MUSIC
	TOOK THE BUS TO SCHOOL	IS OVER 5'6" TALL
CAN TELL WHAT A.I.D.S. STANDS FOR	WEARS CONTACT LENSES	HAS TRAVELED OUTSIDE THE U.S.
WAS BORN LATE IN THE MONTH	YOUR NAME	CAN NAME THE HS PRINCIPAL

APPENDIX F

SITE ONE

CHALLENGE YOUR MIND

CHALLENGE YOUR MIND

Each question below contains a number which equals a commonly-known phrase.The phrase is indicated by the letters. Find the missing words to complete each phrase.

Example: 16= O in a P
Answer: 16= Ounces in a Pound

1. 26 = L of the A
2. 1001 = A N
3. 7 = W of the W
4 12 = S of the Z
5. 54 = C in a D
6. P in the S S
7. 88 = P K
8. 13 = S on the A F
9. 32 = D F at which W F
10. 18 = H on A G C
11.90 = D in A R A
12. 200 = D for P G in M
13. 8 = S on a S S
14. 3 = B M (S H T R)
15. 4 = Q in a G
16. 24 = H in a D
17. 1 = W on a U
18. 5 = D in a Z C
19. 57 = H V
20. 11 = P on a F T
21. 1000 = W that a P is W
22. 29 = D in F in a L Y

APPENDIX G

SITE ONE

WHAT?

WHAT...

ANSWER THE QUESTIONS PRESENTED BELOW TO THE BEST OF YOUR ABILITY.

1. What is one thing you would change in our world?

2. What is one thing you hope your own children will not have to go through?

3. What is one thing about which you have changed your mind recently?

4. Who is the one person you know who seems to have it "more together than you? What would you like to borrow from his/her life?

5. How did you handle a recent disagreement?

6. What would you have "60 Minutes" investigate next? (or who)

7. What is one issue on which you have not yet formed a definite opinion?

8.Who is the fairest adult you know? (and why?)

9 What do you want to do about racism?

10 What is something in the news that really disturbed you lately?

11. Where do you want to be twenty years from now?

12. What one quality do you want in a friend?

13. What is something you really want to learn how to do before you die?

14. What are two places you must see this year?

15. What one thing do you dislike about our high school?

APPENDIX H

SITE ONE

FOOD PYRAMID

THE GREAT PYRAMID ACTIVITY

STEP 1: Assemble groups (quietly and quickly)

STEP 2: Assign roles as follows,
Roles:
Using the first letter of the first name A-Z. (use height if a tie!)
-time keeper
-presenter
-materials manager
-task organizer
-recorder of information
-presenter

STEP 3: Materials include scissors, tape, poster paper, markers.

STEP 4: Task- cut out and attach the various foods to the poster paper. Label your section of the pyramid and be prepared to explain the nutrient and function that your food provides in detail.

STEP 5: Each group must cut their poster paper to coordinate with the other groups. The sizes will be passed out to each individual group.

INSTRUCTION SHEET
GROUP 1

-48 in. at Thebes
-36 in. at the top
-14 in. high

INSTRUCTION SHEET
GROUP 2

-14 in. at the base
-10 in. at the top
-14 in. tall
-left edge is at a 90 degree angle

INSTRUCTION SHEET
GROUP 3

-22 in. at the base
-14 in. at the top
-14 in. tall
-right edge is at a 90 degree angle

INSTRUCTION SHEET
GROUP 4

-12 in. at the base
-6 in. at the top
-14 in. tall
-right edge is at a 90 degree angle

INSTRUCTION SHEET
GROUP 5

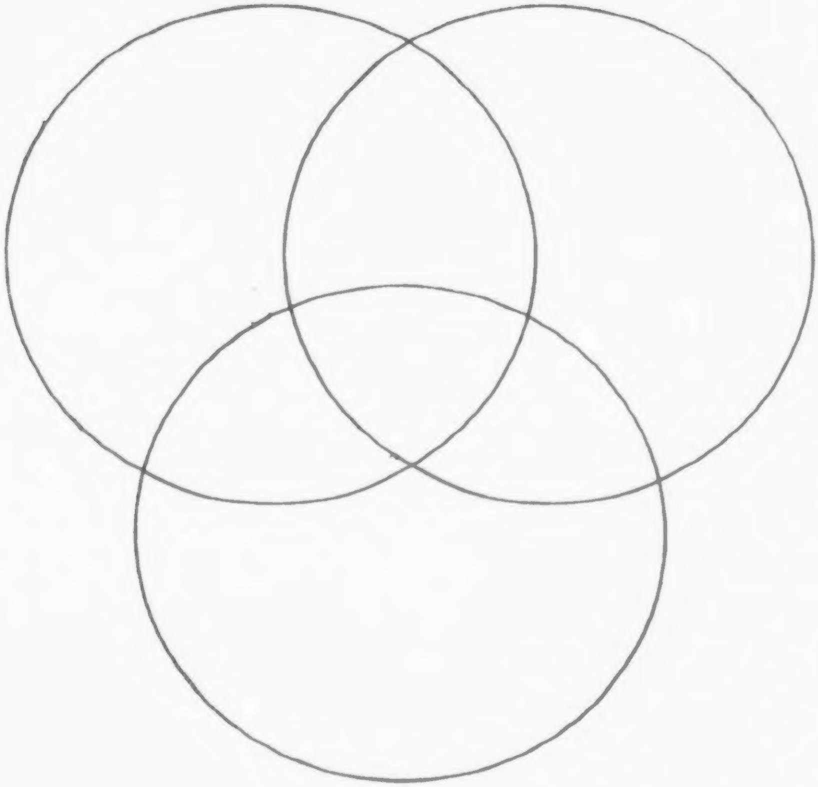
-12 in. at the base
-6 in. at the top
-14 in. tall
-left edge is at a 90 degree angle

APPENDIX I

SITE ONE

VENN DIAGRAM

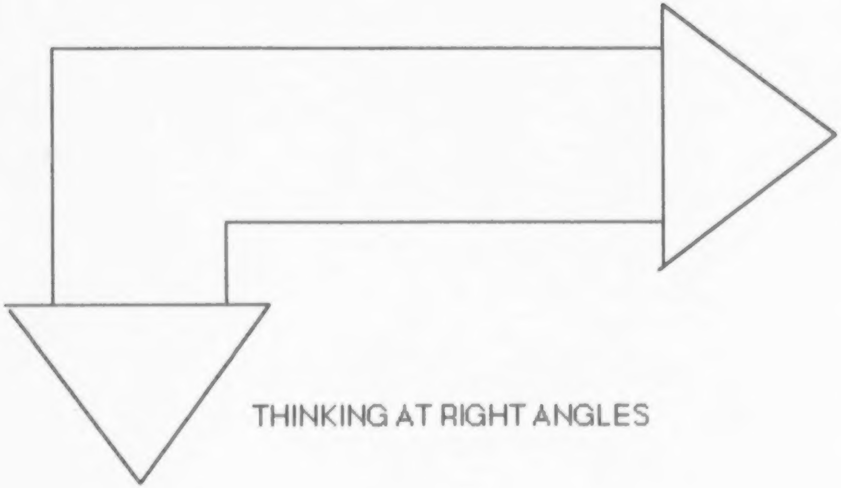
VENN DIAGRAM



APPENDIX J

SITE ONE

LEARNING AT RIGHT ANGLES



THINKING AT RIGHT ANGLES

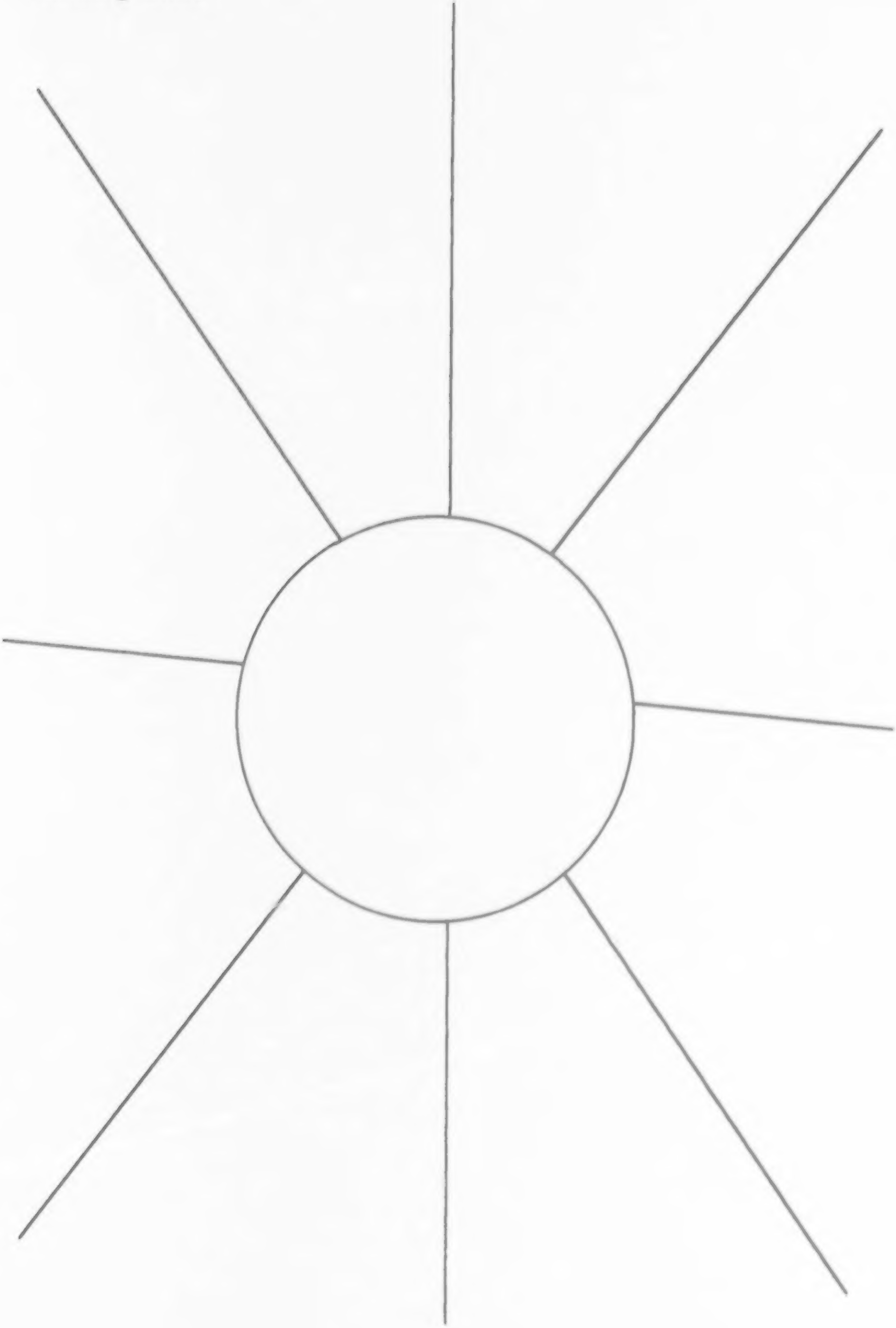
APPENDIX K

SITE ONE

WEBS/MAPPING

WEB

Thinking Skills



APPENDIX L

SITE ONE

ENTRANCE CARD

CHAPTER______NAME____________________________

ENTRANCE CARD: /   /

APPENDIX M
SITE ONE
FOOD JOURNAL

WEEKLY FOOD CHART

WEEK OF / /	SUN	MON	TUES	WED	THURS	FRI	SAT
BREAKFAST							
LUNCH							
DINNER							
SNACK							

APPENDIX N

SITE ONE

LIFESTYLE CONTRACT

NAME________________________________DATE________________

Life-Style Contract

A. The habit I would like to change is

B. I know with effort I can change this behavior because

C. The best resources that can provide me with information on changing this habit are (classes, books, people, organizations. etc.)

D. Some activities that can help me change this habit are .... (Write down as many as you can think of. Be creative!)

E. I know I will have changed my behavior when

F. I would like to change my behavior by ________________________

G. A small reward I will give myself for making progress toward behavior change is

H. A big reward I will give myself when I have changed my behavior is

I. I will ask ________________to act as my helper as I work toward changing my behavior.

J. To help me change this habit I will ask my helper to

K. I will be in contact with my helper (state how often)

L Restate your personal contract. I______________(your name) care about my health and life-style. I agree to change __________(habit) by________(date). The proof that I have reached my goal will be

Signature________________________________Date

APPENDIX O

SITE ONE/TWO

KWL CHART

K W L CHART

What I KNOW about.....	What I WANT to learn or know about.....	What I LEARNED about.....

APPENDIX P

SITE ONE/TWO

PMI CHART

P (+)	M (-)	I (INTERESTING)

APPENDIX Q

SITE ONE

PORTFOLIO ASSESSMENT FORM

WEEKLY ASSESSMENT

NAME__________________DATE_______
UNIT_________TEACHER_____________

YES NO

COMMENTS

TOTAL POINTS__________

APPENDIX R

SITE TWO

BACK TO SCHOOL SCAVENGER HUNT

Back To School Scavenger Hunt

Find someone who fits the description in the box. Have them sign their name in the box. Each person can only sign each sheet one time. The item must have happened over the summer.

Someone who is taller than you.	Someone who went to another state.	Someone who rode a horse.	Someone who built a fort.
Someone who read a book.	Someone who volunteered time to help someone else.	Someone who got a new pet.	Someone who used a computer.
Someone who went camping.	Someone who moved.	Someone who had a friend stay over night.	Someone who went to a movie.
Someone with different color eyes than I have.	Someone who went to a birthday party.	Someone who traveled by boat on a lake.	Someone who planted a garden.

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APPENDIX S

SITE TWO

PLAYER DATA SHEET

PLAYER DATA

NAME ____________________

AGE __________ TEAM ____________________

SPORTS ____________________

HOBBIES ____________________

FAMILY ____________________

APPENDIX T

SITE TWO

PARENT & TEACHER SURVEYS

PREPROGRAM PARENT / GUARDIAN SURVEY

1. How often has your child taken standardized tests in school?

Frequently Sometimes Rarely Never Unknown

2. What type of tests were usually given in their classes?

True/False Mult. choice Matching Short answer Essay

Other (Project, oral, etc...)____________________________ Unknown

3. What type of test did they seem to like the best?

True/False Mult. choice Matching Short answer Essay

Other (Project, oral, etc...)____________________________ Unknown

4. How did your child feel when they had to take a test?

Confident Relaxed Confused Nervous Unknown

5. What type of test did they worry most about?

True/False Mult. choice Matching Short answer Essay

Other__________________________________ Unknown

6. How much time has your child spent studying for a major test?

2 hours or more 1 to 2 hours 1/2 to 1 hour

15 minutes or less Didn't study for tests Did not observe

7. How do they feel after the test?

Confident Relaxed Confused Nervous

PREPROGRAM TEACHER SURVEY

1. How often do you give standardized tests in school?

Frequently Sometimes Rarely Never Unknown

2. What type of tests are usually given in your classes?

True/False Mult. choice Matching Short answer Essay

Other (Project, oral, etc...)____________________ Unknown

3. What type of test do you seem to like the best? (To give)

True/False Mult. choice Matching Short answer Essay

Other (Project, oral, etc...)____________________ Unknown

4. How do your students feel when they have to take a test?

Confident Relaxed Confused Nervous Unknown

5. What type of test do they worry most about?

True/False Mult. choice Matching Short answer Essay

Other________________________________ Unknown

6. How much time do you think your students spent studying for a major test?

2 hours or more 1 to 2 hours 1/2 to 1 hour

15 minutes or less Didn't study for tests Did not observe

7. How do they feel after the test?

Confident Relaxed Confused Nervous

APPENDIX U

SITE TWO

RULES FOR GROUP WORK

CHARACTERISTICS OF GROUPS THAT ACHIEVE

1. EVERYONE PARTICIPATES.

2. MEMBERS DON'T FIGHT - THEY GET ALONG.

3. THE GROUP DISCUSSES THEIR ANSWERS.

4. THE GROUP SHARES IDEAS.

5. NO PUTDOWNS.

6. MEMBERS CHECK EACH OTHER'S WORK.

7. MEMBERS REACH CONSENSUS.

8. THE GROUP STAYS ON TRACK.

APPENDIX V

SITE TWO

EGYPT PROJECT LIST

EGYPT PROJECT SHEET

THE FOLLOWING IS A LIST OF POSSIBLE PROJECTS FOR YOU TO CHOOSE FROM TO COMPLETE YOUR UNIT ON EGYPT.

SUCCESSFULLY COMPLETING 4 PROJECTS WILL RESULT IN AN "A".
SUCCESSFULLY COMPLETING 3 PROJECTS WILL RESULT IN A "B".
SUCCESSFULLY COMPLETING 2 PROJECTS WILL RESULT IN A "C".
SUCCESSFULLY COMPLETING 1 PROJECT WILL RESULT IN A "D".
SUCCESSFULLY COMPLETING NO PROJECTS WILL RESULT IN AN "F". (ZERO)

You may choose the projects you wish to work for. Extra projects will result in extra credit.

1. ***Make a "Mummy Case"*** using personal symbols. Use the guide on the "TAKE A CLOSE LOOK AT AN EGYPTIAN MUMMY CASE" page for instructions.

2. ***Make a diorama of the "Battle of Kadesh"***, the most famous battle in Egyptian history. your teacher will give you a work sheet explaining the details. This sheet also gives you valuable cutouts you may use in your diorama.

3. ***Pretend you are a young scribe who has witnessed the funeral procession of King Tutankhamen.*** Describe what you saw and how you felt in a letter to another scribe in a distant Egyptian village.

4. ***Draw a picture of the god Anubis*** weighing the heart of a dead person against the feather of truth. Use appropriate colors in your illustration.

5. ***Make a model of one of the great pyramids.*** You may

construct your model from heavy paper or cardboard. Paint or color it so it looks like the stone the Egyptians used.

6. ***List the steps used to preserve a body. (Mummification)*** Be sure to explain why certain procedures were important to the Egyptian religion of that time.

7. ***Construct a collage of Egyptian pictures.*** You may use drawings, magazine pictures, or photocopies. Drawings and photocopies should be colored with crayons or colored pencils. your teacher can supply you with pictures.

8. ***Write a one-page report in which you invent your own Egyptian-type god.*** Include a description of what your god looks like and what the significance of this god is to the Egyptian people of that ancient time.

9. ***Draw a large, detailed map of Egypt*** showing important physical as well as political features of the ancient times we have studied. Your map should include a key, a compass rose, and a scale showing distance.

10. ***Read an Egyptian story or fable to the class.*** Be prepared to answer questions or to tell students where they can find out more information.

11. ***Imagine you are an archeologist who has found an ancient Egyptian artifact.*** Bring the artifact and tell the class about it. You may create an artifact to talk about,(Your teacher will give you examples) or you may adapt an object to use as an artifact. The object should be decorated in the ancient Egyptian style we have been studying.

12. ***Develop a project of your own choosing.*** Discuss this with your teacher before you make a decision. The project you develop may count for more than one project listed above and you may choose to do this as a group.

RESOURCES: You will need to get information from a variety of sources. Your coloring sheets and captions will give you much information. your teacher has old National Geographics which can be photocopied. He also has other books about Egypt. You should check the school library and the Public Library for information. The computers in our room have the encyclopedia from which you can print-out information and some any pictures you may need.

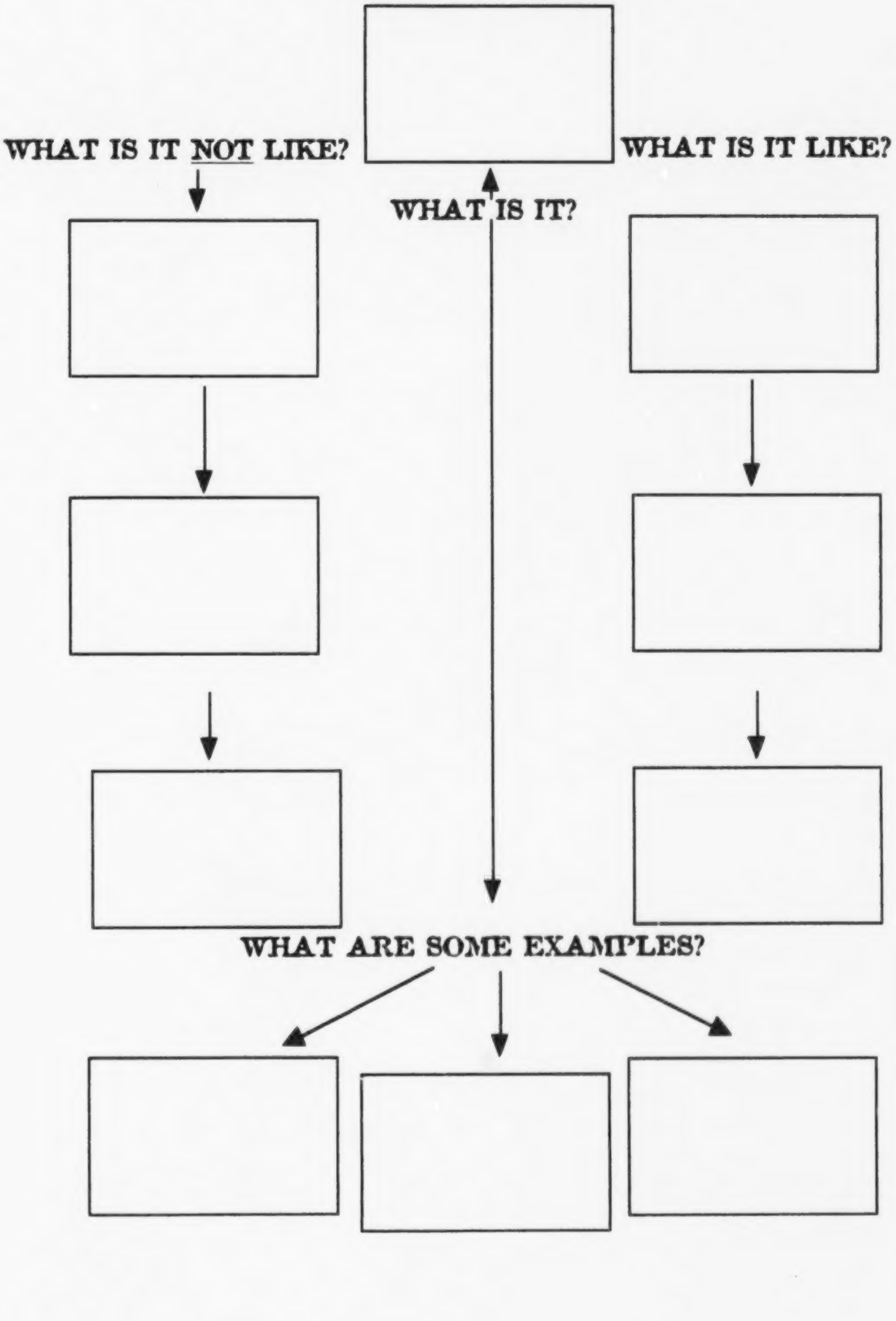
FINALLY: Be realistic about your grade goal, but try to earn the best grade you can. Most of all, have fun!

APPENDIX W

SITE TWO

WORD MAP

WORD MAP


WHAT IS IT NOT LIKE?
WHAT IS IT LIKE?
WHAT IS IT?
WHAT ARE SOME EXAMPLES?

APPENDIX X

SITE TWO

GROUP EVALUATION

INDIVIDUAL EVALUATION FOR GROUP ACTIVITY

1. GROUP MEMBERS: ______________________________(your name first)

____

____

____

____

____

2. WHAT DID YOU DO PERSONALLY FOR THIS GROUP ACTIVITY?

3. DID YOU LIKE THIS ACTIVITY? WHY OR WHY NOT? EXPLAIN.

4. WHAT DID YOU LEARN?

5. HOW DID THIS ACTIVITY APPLY TO WHAT YOU'VE LEARNED BEFORE?

6. WOULD YOU LIKE TO CHANGE ANYTHING? IF SO, EXPLAIN.

7. LET'S PRETEND... YOUR GROUP'S PAY FOR THIS PROJECT IS$______________ HOW WOULD YOU DIVIDE THIS MONEY UP AMONG YOUR GROUP MEMBERS, BASED ON WHAT EACH PERSON CONTRIBUTED?

NAME______________________________$__________

NAME______________________________$__________

NAME______________________________$__________

NAME______________________________$__________

NAME______________________________$__________

NAME______________________________$__________

APPENDIX Y

SITE TWO

COLORING BOOK GRADING SHEET

EGYPT PROJECTS

YOU NEED THE FOLLOWING COMPLETED ITEMS:

1. EGYPT PROJECTS

THESE SHOULD BE TURNED-IN AS COMPLETED PROJECTS.

NO LATE PROJECTS ACCEPTED EXCEPT FOR EXCUSED ABSENCES.

2. EGYPT COLORING BOOK

YOUR COMPLETED BOOK INCLUDES:

A. FRONT COVER, DECORATED.

B. PAGES IN THE FOLLOWING ORDER:

MAP
HIEROGLYPHICS
4-6
12-13
7-8
9-10
15-19
23-20
GODS SHEET
29-26
30-33
34-35
40-41
42-43
36

C. BACK COVER

THE FOLLOWING SHEETS ARE TO BE COLORED:
PAGES 4, 6, 7, 15, GODS SHEET, 33, 34, 40, 43

APPENDIX Z

SITE TWO

EGYPT PROJECT EVALUATION

EGYPT PROJECT EVALUATION

PROJECT 1

1. QUALITY OF WORK	1	2	3	4	5
2. NEATNESS	1	2	3	4	5
3. TASK COMPLETION	1	2	3	4	5

PROJECT 2

1. QUALITY OF WORK	1	2	3	4	5
2. NEATNESS	1	2	3	4	5
3. TASK COMPLETION	1	2	3	4	5

PROJECT 3

1. QUALITY OF WORK	1	2	3	4	5
2. NEATNESS	1	2	3	4	5
3. TASK COMPLETION	1	2	3	4	5

EXTRA CREDIT ______________

TOTAL POINTS ______________

APPENDIX AA

SITE TWO

IMPORTANCE PYRAMID

EGYPTIAN PYRAMID BUILDING

YOUR JOB, AS PYRAMID BUILDERS, IS TO BUILD THE STRONGEST PYRAMID POSSIBLE SO THAT THE PHARAOH WILL BE ABLE TO TRAVEL TO THE AFTERLIFE. GROUP MEMBERS WILL HAVE TO WORK TOGETHER SO THAT THIS WILL HAPPEN, OR THEY WON'T BE ABLE TO GO ALONG WITH THE PHARAOH AFTER THEY PASS ON, AND THEIR HEARTS WILL BE EATEN BY THE DEMON OF THE DEAD.

BUILDING BLOCKS EACH REPRESENT AN IMPORTANT PART OF ANCIENT EGYPTIAN CULTURE. EACH GROUP MUST DECIDE ON WHAT THEY FEEL IS IMPORTANT. THE MOST IMPORTANT PARTS ARE ON THE BOTTOM AND THE LEAST IMPORTANT PARTS ARE ON THE TOP.

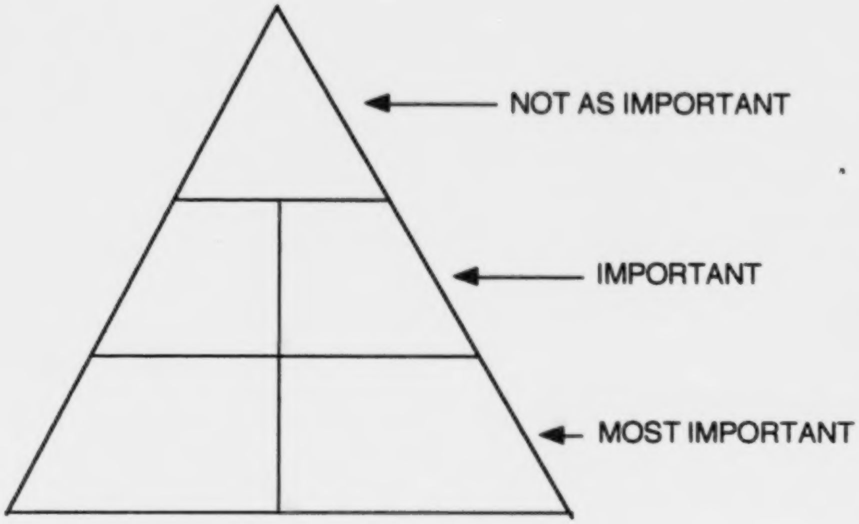
YOU WILL HAVE THE FOLLOWING JOBS:

1. ARCHITECT-DRAWS THE PYRAMID AND LABELS THE BUILDING BLOCKS .
2. SCRIBE-LISTS THE ITEMS IN ORDER OF IMPORTANCE AND WRITES WHY EACH PART WAS IMPORTANT TO THE ANCIENT EGYPTIANS.
3. PRIEST-KEEPS THE MEMBERS ON TIME AND ENCOURAGES THEM TO DO THEIR BEST.
4. PEASANT-GETS MATERIALS AND PRESENTS THE PYRAMID TO THE OTHER GROUPS. (TELLS WHAT WAS AT THE BOTTOM AND WHY, AND TELLS WHAT WAS AT THE TOP AND WHY.)

REMEMBER THAT EACH MEMBER IS AN IMPORTANT PART OF THE PYRAMID BUILDING TEAM.

ON THE BACK IS AN EXAMPLE YOU MIGHT WANT TO USE. FEEL FREE TO DESIGN IT ANOTHER WAY IF YOU WISH.

HERE IS AN EXAMPLE:


NOT AS IMPORTANT
IMPORTANT
MOST IMPORTANT

YOU MAY USE THIS EXAMPLE OR COME UP WITH ONE OF YOUR OWN.

APPENDIX BB

SITE TWO

FAT/SKINNY QUESTIONS

EGYPTIAN TEACHING QUESTIONS

YOUR PYRAMID GROUP IS RESPONSIBLE FOR CONSTRUCTING A REVIEW LESSON ABOUT EGYPT TO PRESENT TO THE REST OF THE CLASS. YOU WILL BEGIN BY ASKING THEM QUESTIONS ABOUT EGYPT TO INCLUDE IN THE LESSON. THE QUESTIONS WILL BE "**FAT**" QUESTIONS, (QUESTIONS WHICH REQUIRE LOTS OF DISCUSSION AND TIME TO THINK THROUGH TO AN ANSWER) AND "SKINNY" QUESTIONS (QUESTIONS WHICH MAY BE ANSWERED WITH A YES, NO, OR JUST A FEW WORDS).

PLACE THE QUESTIONS IN THE TABLE BELOW. MAKE SURE THEY MEET THE RULES FOR FAT AND SKINNY QUESTIONS. GROUP JOBS CONSIST OF : 1. ARCHITECT, 2. SCRIBE, 3. PRIEST, AND 4. PEASANT. *ROTATE THEM I POSITION TO THE RIGHT SO EVERYONE HAS A DIFFERENT JOB.*

FAT?	**SKINNY?**
1.	**1.**
2.	**2.**
3.	**3.**

AFTER ALL QUESTIONS ARE COMPLETE, THE SCRIBES WILL MEET AS A "**SUN GOD RE**" GROUP TO COMBINE QUESTIONS AND MAKE THE REVIEW LESSON. THE "**RE**" GROUP WILL GIVE NEW JOBS TO EACH OTHER.

APPENDIX CC

SITE TWO

PLAY ASSESSMENT RUBRIC

Code of Hammurabi Rubric

Rank the groups from 1 (the lowest), to 5 (the highest)

Acting	1	2	3	4	5
Preparation	1	2	3	4	5
Content	1	2	3	4	5
Scenery	1	2	3	4	5

Total Points________

APPENDIX DD

SITE TWO

PLAY PRACTICE PICTURES

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APPENDIX EE

SITE TWO

ADOPT-A-COUNTRY CHECKLIST

ADOPT-A-COUNTRY GRADING SHEET

Name____________________

1. Cover. ________(5 pts)
2. Title Page. ________(5 pts)
3. Table of Contents. ________(5 pts)
4. Body of Paper. ________(55 pts)
5. Bibliography. ________(5 pts)
6. Required Extra Items:
    - Map ________(4 pts)
    - Flag ________(4 pts)
    - Costume Drawings ________(4 pts)
    - Recipe ________(4 pts)
    - Travel Poster________(4 pts)
7. Not Required Items ________(extra)
   (Current events, newspaper clippings, other maps, graphs, charts, pictures, collages, etc.)
8. Note Cards ________(5 pts)

REPORT TOTAL_________( )

FOOD FEST MEAL ________( )
COSTUME ______________( )

APPENDIX FF

SITE TWO

CASTLE/CATHEDRAL QUIZ QUESTIONS

CASTLE WORKSHEET

(Words that look like this: ***Chimneys*** can be found in dark type surrounding the castle on your handout.)

1. What is the *Gatehouse?*

2. What is a *Bailiff*?

3. What is the *Keep*?

4. Why were narrow slits good for the archers? (*Deadly Fire*)

5. How did you get across the moat ? (*Moat Point*)

6. What is the *Clever Defense*?

7. What was the roof covered in?

8. What are the *Deadly Tubes* ?

9. What did children drink? (*Cheers*)

10. What was the secret dungeon called? (*Doing Time*)

11. What did the farrier do? (*Forging Links*)

12. What were the toilets called? (*Splash*)

13. What invention made castles ineffective? (*Getting Inside*)

14. Name three ways to get inside a castle? (Not counting the answer for 13.)

15. What is a basket of hot charcoal called? (*On Guard*)

16. When were *Chimneys* introduced?

17. What kind of pipes took water to the kitchen? (*Cistern*)

18. What is the *Portcullis* ? (Hint: It's near the drawbridge.)

19. Who had the absolute worst job in the castle? (Read the Introduction in the upper left corner.)

20. Stone pillars or__________________protected soldiers on the *Wall Walk*. .

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Cathedral Worksheet

(Words that look like this: ***Niche*** can be found in dark type surrounding the cathedral on your handout.)

1. What is the *Triforium* ?

2. What is a *Niche* ?

3. What is the *Nave* ?

4.How much did the largest of the cathedrals *Bells* often weigh ?

5. What did a walk along the *Maze* represent ?

6. What is the *Apse* ?

7. What is an *Ambulatory* ?

8. What is the *Transept* ?

9. Who was the *Lady Chapel* dedicated to ?

10. What was the *Choir* and the altar separated from the rest of the church by ?

11. A thin skin of what material makes the roof and *Roof beams* waterproof ?

12. Who was buried in the *Crypt* ?

13. Which direction does the *Main entrance* face ?

14. When was this _Jewel of France_ built ?

15. You would find a relic in the _Shrine_. What is a relic ?

16. How many pieces of _Stained glass_ made up the windows ?

17. What was the job of the _Master mason_ ? Of the _Bishop_ ? Of the _Smith_ ?

18. When was the _Organ_ first used in European cathedrals ?

19. Where is the _Presbytery_ located ?

20. Why did wealthy supporters pay priests to say mass in the _Chantry chapel_

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APPENDIX GG

SITE TWO

AFRICA GROUP EVALUATION

AFRICA GRADING RUBRIC

GROUP SUBJECT__________________________

RATER'S NAME __________________________

RATE THE GROUP ACCORDING TO THE FOLLOWING CRITERIA:
(5 IS THE HIGHEST AND 1 IS THE LOWEST)

1. Was the group's presentation clear?

1 ——— 2 ——— 3 ——— 4 ——— 5

2. Did the group hold your interest?

1 ——— 2 ——— 3 ——— 4 ——— 5

3. Did you understand the material presented?

1 ——— 2 ——— 3 ——— 4 ——— 5

4. Would you like to have other material presented by this group?

1 ——— 2 ——— 3 ——— 4 ——— 5

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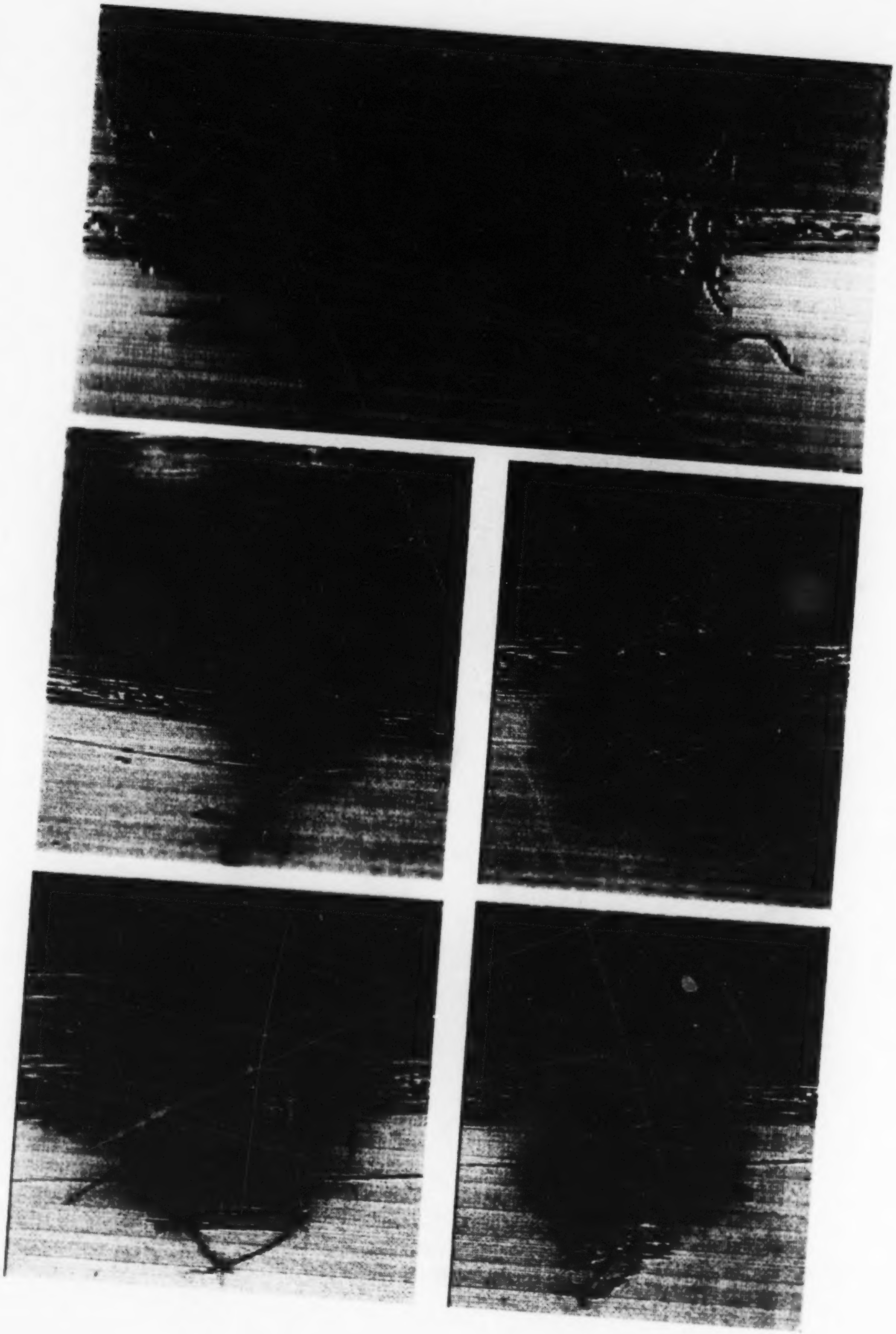
APPENDIX HH

SITE TWO

AFRICAN MASKS



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APPENDIX II

SITE TWO

SAMPLE MASK STORY

Mask Story
[redacted]

Once upon a time there was a little kid that was very sick. His family was very sad because they thought he was going to die. But all that was wrong with the kid is he had the chickenpocks. So the kids mom bought ~~to~~ a mask for him to wear. and to hide the kids identity. So all the time he would go outside he had to wear the mask. The mask was a African jungle Mask. The kid was so attached to the mask he named his mask. The masks name was Matika. But one day when the kid was running to school his mask fell of his face. Everybody was laughing at him. Even his teacher was laughing. His brotter said its okay Mahika I bet you everybody her has probably had the chickenpocks, even I have had the chickenpocks. But the mask that fell of Mahikas face wasn't even broken so Mahika picked up the mask and put it back on. He went home with his brother and Mahika told his mom and his dad the whole story and his mom said it doesn't matter what people think it only matters what you think. The next morning Mahika looked in the mirror and he noticed that his chickenpocks were gone and he was happy forever.

APPENDIX JJ

SITE TWO

MASK RUBRIC

AFRICAN MASK RUBRIC

RATE YOUR WORK ACCORDING TO THE RUBRIC. 1 IS LOW, 3 IS HIGH.

1. CREATIVITY	1	2	3
2. USE OF FOUND OBJECTS	1	2	3
3. APPEARANCE	1	2	3
4. CONNECTS WITH STORY	1	2	3
5. LEVEL OF FUN-ENJOYMENT	1	2	3

TOTAL POINTS ____________________

APPENDIX KK

SITE ONE

POST INTERVENTION TEST SURVEY CHARTS

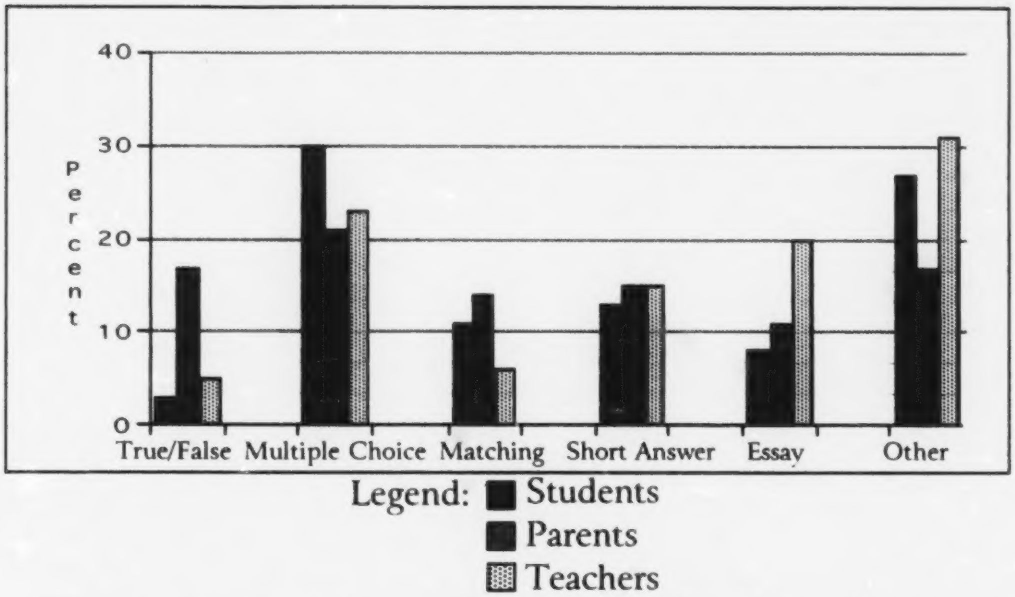

Figure 1. Results of the survey question: What types of tests are usually given in your classes?

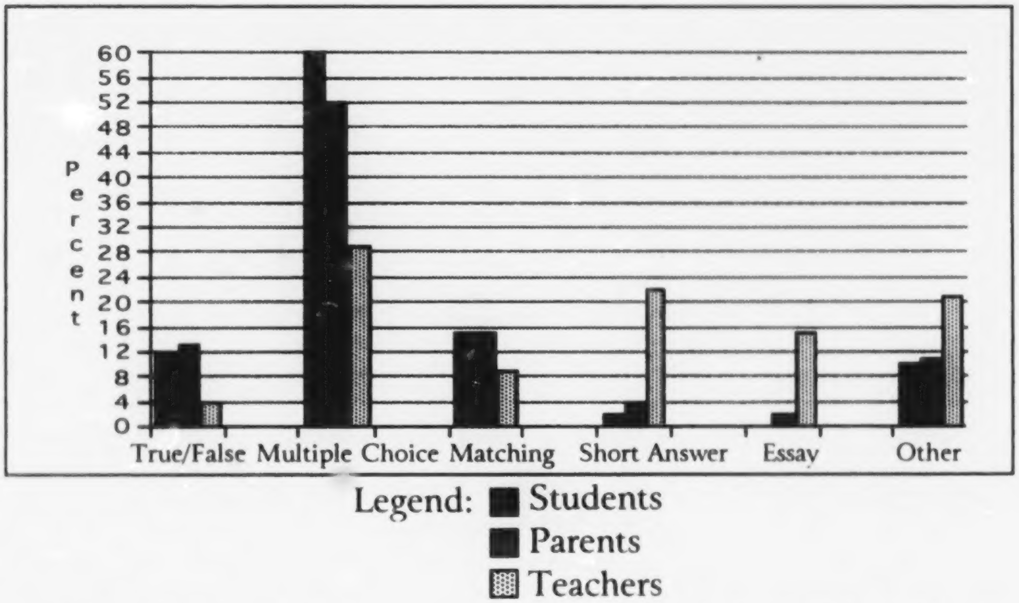

Figure 2. Results of the survey question: Which type of test do you like the best?

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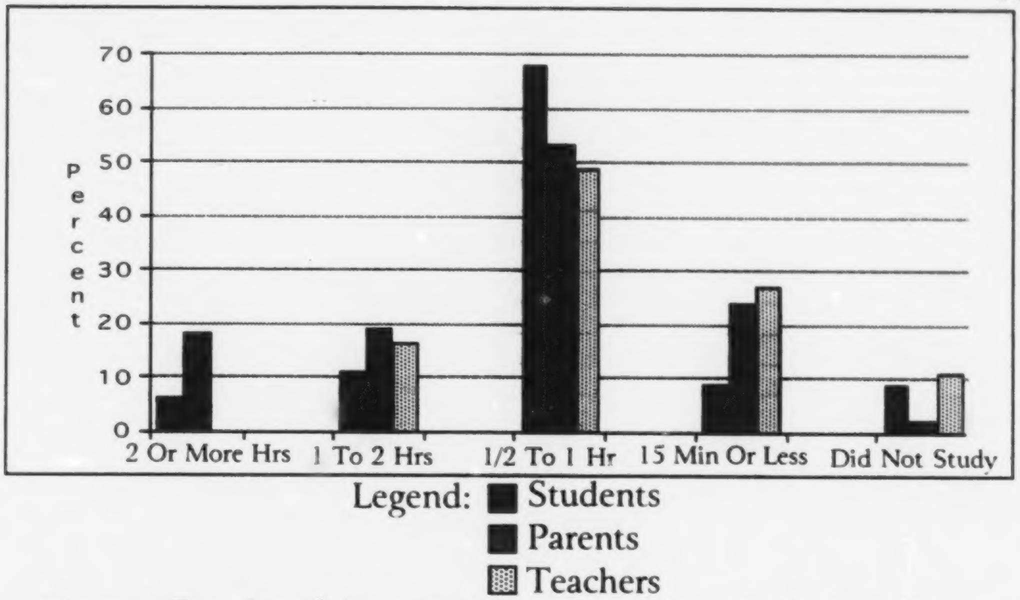

Figure 3. Results of the survey question: How much time do you spend studying for tests?

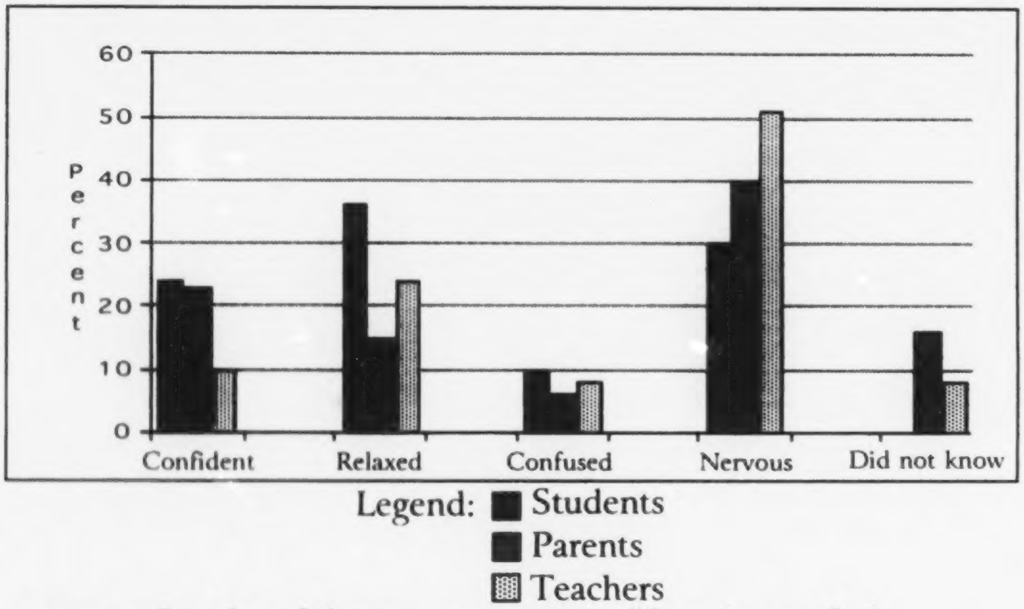

Figure 4. Results of the survey question: How do you feel when you have to take a test?

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APPENDIX LL

SITE ONE

POST INTERVENTION ATTITUDE SURVEY CHARTS

Results of Student Questionare

Headings are represented by the following: "Pre" represents pre intervention percentages, "Post" represents post intervention percentages, and "+ or - " represents the percentage change plus or minus.

Question	Category	Pre	Post	+ or -
1. I like to attend school.	Never	5	3	-2
	Sometimes	36	31	-5
	Often	49	54	+5
	Always	10	12	+2
2. I use my time wisely.	Never	6	5	-1
	Sometimes	45	39	-6
	Often	30	33	+3
	Always	19	23	+4
3. I like to read.	Never	9	8	-1
	Sometimes	42	40	-2
	Often	40	43	+3
	Always	9	9	----
4. I try to use new vocabulary words.	Never	10	8	-2
	Sometimes	58	50	-8
	Often	20	29	+9
	Always	12	13	+1

Question	Category	Pre	Post	+ or -
5. I ask for help with my homework.	Never	12	9	-3
	Sometimes	62	67	+5
	Often	20	20	----
	Always	6	4	-2
6. I ask for help with school projects.	Never	12	9	-3
	Sometimes	60	66	+6
	Often	22	21	-1
	Always	6	4	-2
7. I follow directions in class.	Never	6	5	-1
	Sometimes	25	22	-3
	Often	35	38	+3
	Always	34	35	+1
8. I bring work home for others to see.				
	Never	36	30	-6
	Sometimes	35	29	-6
	Often	17	25	+8
	Always	12	16	+4

Question	Category	Pre	Post	+ or -
9. I talk about school activities at home.				
	Never	15	10	-5
	Sometimes	30	32	+2
	Often	26	27	+1
	Always	29	30	+1
10. I use the community library.	Never	15	10	-5
	Sometimes	42	45	+3
	Often	34	35	+1
	Always	9	10	+1
11. I have daily chores or responsibilities.				
	Never	13	13	----
	Sometimes	14	13	-1
	Often	30	31	+1
	Always	43	43	----
12. I do my chores and fulfill my responsibilities without being told.				
	Never	12	10	-2
	Sometimes	26	29	+3
	Often	40	40	-----
	Always	22	21	-1

APPENDIX MM

SITE TWO

POST INTERVENTION TEST SURVEY CHARTS

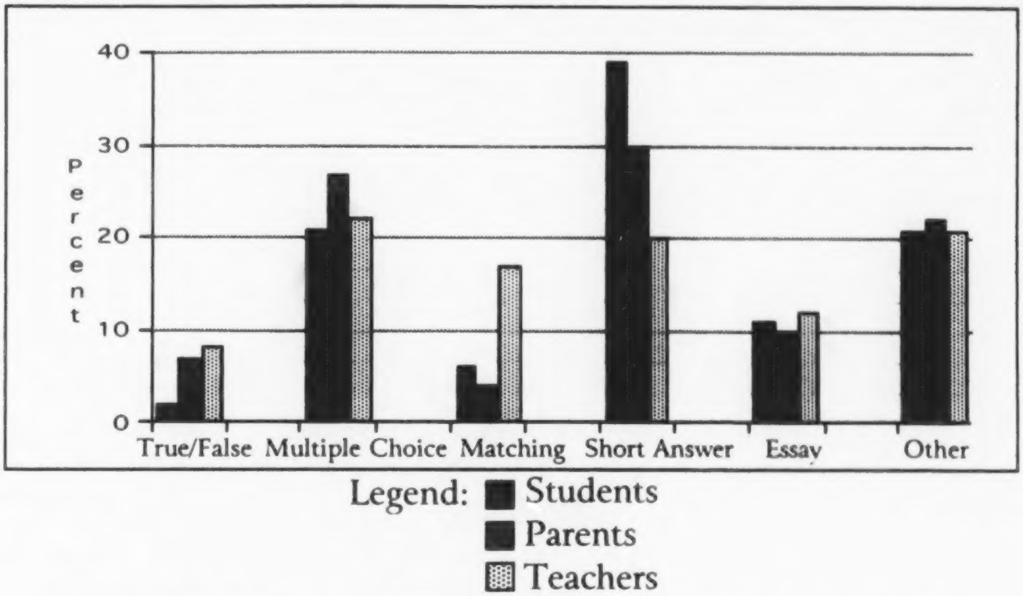

Figure 5. Results of the survey question: What types of tests are usually given in your classes?

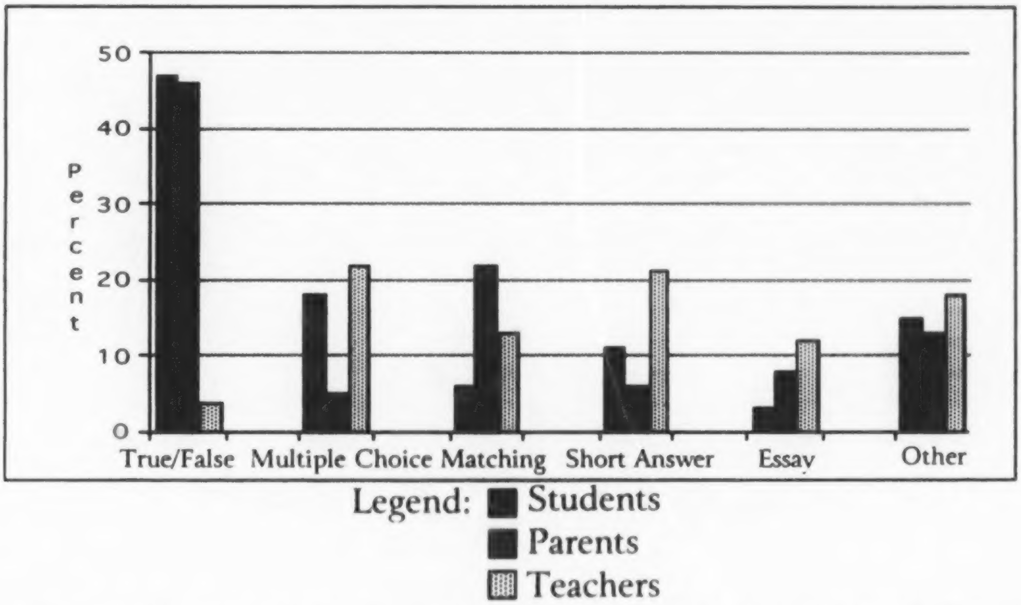

Figure 6. Results of the survey question: Which type of test do you like the best?

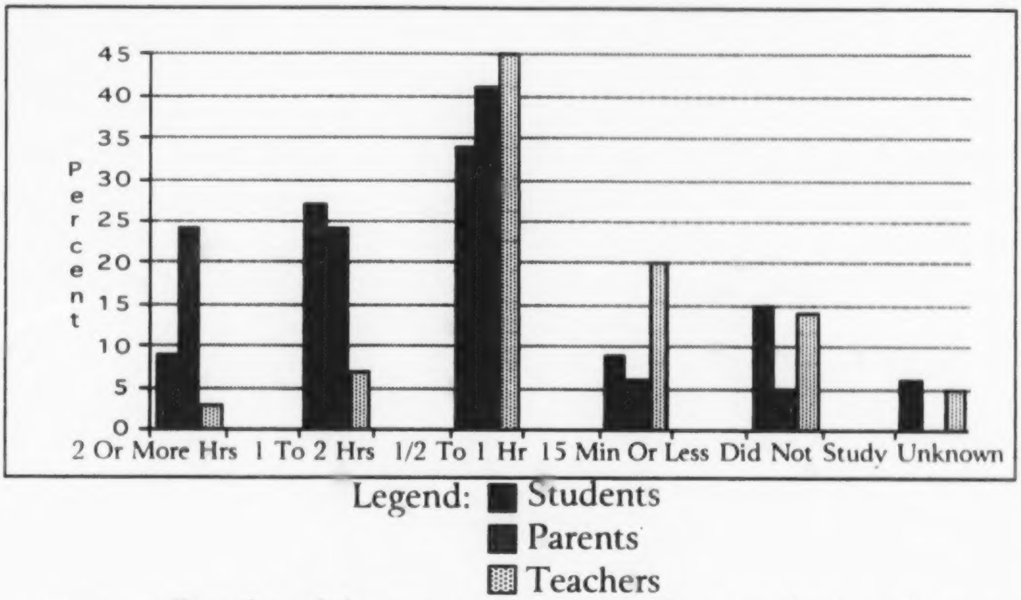

Figure 7. Results of the survey question: How much time do you spend studying for tests?

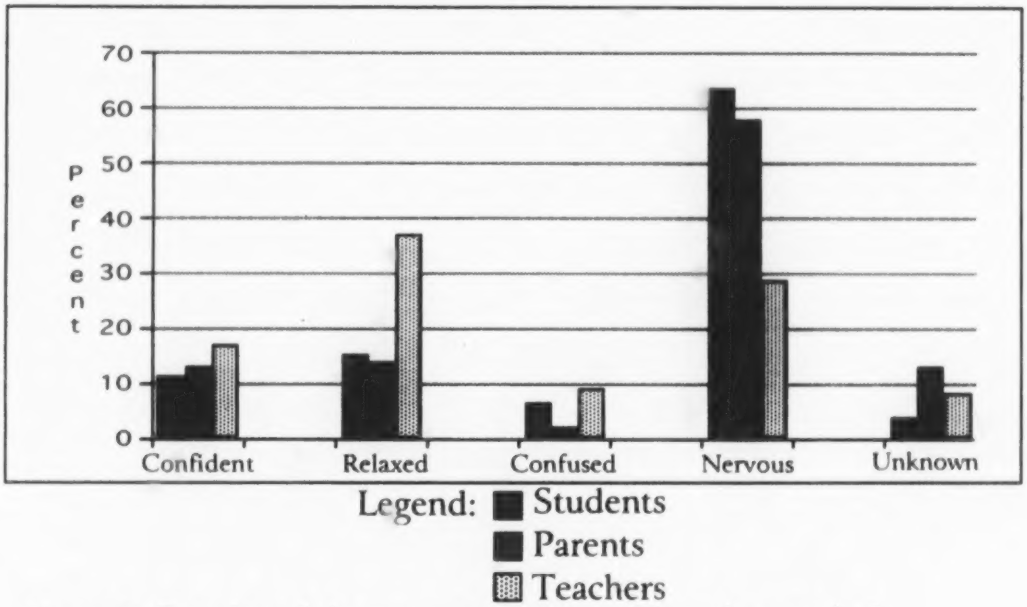

Figure 8. Results of the survey question: How do you feel when you have to take a test?

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APPENDIX NN

SITE TWO

POST INTERVENTION ATTITUDE SURVEY TABLE

Results of Student Questionare

Headings are represented by the following: "Pre" represents pre intervention percentages, "Post" represents post intervention percentages, and "+ or - " represents the percentage change plus or minus.

Question	Category	Pre	Post	+ or -
1. I like to attend school.	Never	4	2	-2
	Sometimes	12	13	+1
	Often	54	49	-5
	Always	30	36	+6
2. I use my time wisely.	Never	3	3	----
	Sometimes	22	18	-4
	Often	48	44	-4
	Always	27	35	+8
3. I like to read.	Never	6	4	-2
	Sometimes	27	22	-5
	Often	58	51	-7
	Always	9	27	+18
4. I try to use new vocabulary words.	Never	8	6	-2
	Sometimes	47	43	-5
	Often	27	25	-2
	Always	18	26	+8

Question	Category	Pre	Post	+ or -
5. I ask for help with my homework.	Never	4	7	+3
	Sometimes	68	67	-1
	Often	19	16	-3
	Always	9	10	+1
6. I ask for help with school projects.	Never	5	8	+5
	Sometimes	59	53	-6
	Often	23	27	+4
	Always	13	11	-2
7. I follow directions in class.	Never	2	1	-1
	Sometimes	24	17	-7
	Often	38	43	+5
	Always	36	39	+3
8. I bring work home for others to see.	Never	11	8	-3
	Sometimes	19	15	-4
	Often	29	33	+4
	Always	41	44	+3

Question	Category	Pre	Post	+ or -
9. I talk about school activities at home.	Never	13	9	-4
	Sometimes	17	15	-2
	Often	27	29	+2
	Always	43	47	+4
10. I use the community library.	Never	8	5	-3
	Sometimes	39	37	-2
	Often	31	34	+3
	Always	22	24	+2
11. I have daily chores or responsibilities.	Never	12	11	-1
	Sometimes	19	17	-2
	Often	33	35	+3
	Always	36	37	+1
12. I do my chores and fulfill my responsibilities without being told.	Never	4	2	-2
	Sometimes	24	21	-3
	Often	46	45	-1
	Always	26	32	+6

END

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